CHAPTER -1
INTRODUCTION

1.1 Background of the Study

New products and services are results of the needs and wants of human being. The activities involved in satisfying customers by providing such product and services according to their needs may be twined as marketing. In this context, Kotler states that "Marketing is a societal process by which individuals and groups obtain what they need and want through creating, offering and freely exchanging products and services of value with others."(Kotler P. 9th edition) His main focus was on marketing as a social process performed by individuals and groups. Marketing is fulfilling the needs and wants of the people because in the modern world a buffer is regarded as the 'king' since the success and failure of the marketer largely depends upon the degree of consumer satisfaction. Their needs and wants are fulfilled by the marketer through exchange process of integrating various marketing activities like marketing mix or 4 Ps ie Product, price, place and promotion. "From customer satisfaction, services provider must know how to please their customers. It may be possible addressing into functional relationship between marketing operation and human resources area within the organization."(Timilsina J. 2002). Therefore in summary, marketing activities begin with the identification of consumer needs, run through manufacturing, pricing. Promotion and distribution activities and end with fulfillment of organizational goal through consumer satisfaction.

Since both the product and services are the subject matters of marketing, this study is also concerned with product (Mobile Telephone) and service (communication facilities existing on) that are marketed by Nepal Doorsanchar Co. Ltd. In the field of Telecommunications, NEPAL TELECOM has been claimed as the trusted partner of the people of Nepal since 2032. In order to make life of Nepali easier, NEPAL TELECOM makes continuous effort to introduce the

latest technology of telecommunications. The launch of "NEPAL TELECOM Mobile" is one of such efforts, which has changed the way we think, talk, move and do business now into Nepalese market. In order to describe about mobile telephone and its services, it is necessary to know what communication is and its importance at all. Communication refers to the share or exchange of ideas, feelings, emotion, news and information. It acts as the central nervous system for the development of nation by various ways. It promotes not only economic activities but also reduces the cost of coordinating and implementing development projects, by mobilizing of labour force effectively. Likewise trade industry and commerce depends largely upon the efficient communication system. Also by means of good communication system, the nation can have better link with the foreign countries and can expand international trade with them which helps them to earn foreign currency and can get many opportunities available in the international market.

For the effective communication system, varieties of tools and techniques are being used and "Mobile Telephone" is one of them. Actually, "Mobile Telephone is electronic wireless radio equipment based on digital cellular technology by means of which two way conversations can be done with any other telephone subscriber either of mobile telephone network or of public subscriber telephone network (PSTN). The main feature of mobile telephone is its mobile nature i.e. one can carry the mobile set wherever he wants to go and can talk with other parties at any time he likes.

Nepal Telecom (NTC), introduced (post paid) mobile telephone from Chaitra 2055 targeting for major cities, like Kathmandu Valley, Pokhara, Birgunj and Biratnagar. Nepal Telecom expanded their mobile services by introduced from Bhadra 2060, Pre-paid mobile telephone targeting for general public at lower cost as 'Post Paid Mobile Telephone' services. Thus Nepal Telecom is able to give mobile services to general public since Ashad 30, 2061 as network has been expanding from east to west. The Mobile telephone existing today into Nepalese market is based on "GSM" cellular mobile technology, which refers to, "Global System for Mobile Communication" and this technology as well as mobile

exchange and other accessories were purchased from, "Nortel Company" of Canada. This mobile service is said to be "cellular mobile" since it consists of several cell stations within the target mobile telephone areas. Such cells are installed to provide qualitative and secure service to its customers. For a complete call, the mobile telephone holder must be in frequency coverage area of such call stations.

In first phase of (post-paid) mobile telephone service, Nepal Telecom launched 10000 mobiles line in the four above mentioned cities. Among this, Nepal Telecom distributed 6000 mobile in Kathmandu Valley, 1200 lines in Birgunj and 1400 lines each in Pokhara and Biratnagar. NTC has distributed mobile telephone line in Kathmandu Valley at the end of Magh 2061, 54783 (Post-paid) and 149916 (Pre-paid). Mobile services had been suspended in Nepal after the political development of Magh 19, 2061. The Nepal Telecom that has distributed was been incurring a daily loss of Rs. 8 million since Magh 19.

Kathmandu Valley includes three districts: Kathmandu itself, Lalitpur and Bhaktapur. Due to the popularity of its services within Kathmandu Valley, it is becoming highly demanded because this valley is famous not only as a capital of Nepal but, also the attraction point of tourism, center for all types of business, hub station for other official as well as educational opportunities, large number of population having high level of income, areas of central offices and projects, international airport and highly industrialized area. The detail introductions of these places are presented in fourth chapter. Although the basic telecommunication facilities like ordinary telephone, fax and other services are available in all the above mentioned cities but they are not enough to fulfill the present demand. In such a situation, NTC is introducing and running mobile telephone service in these cities.

Since the history of mobile telephone in the world has not become so old and the Nepalese context it is running through the period of nearly seven years. No more research has been carried out up to this period for the study of mobile telephone. Thus it will be latest research on "Marketing of Mobile Telephone Services". Being the latest study, this research tries to analyze the marketing approach of

NTC in providing mobile telephone service and the consumer's response towards it, which will be highly beneficial to NTC in providing qualitative, service and getting positive response from the customers. It will also be helpful to other scholars and researchers to carry out further research on it.

1.2 Focus of the Study

The present study on the marketing of mobile telephone services basically focuses on the questions. These questions are basically the research questions and they explain the central research motives and indicate the focus of the research work.

- What is marketing approach of NTC for promotion of Mobile telephone?
- What is the level of satisfaction of customer of mobile telephone services?
- What are the reasons/factors responsible for customer satisfaction or dissatisfaction of mobile telephone services?
- What are the ways of improving the customer satisfaction?

1.3 Statement of the Problem

Nepal Telecom (NTC) at present is operated as a 100 per cent government owned organization for providing communication services to all over the country. Since the 77 percent of total are of the kingdom are high hills and snow capped mountain and only 23 percent is the flat land of Terai, such extreme topography and weak infrastructures have made task of providing basic telecommunication facilities more difficult.

Though the top most priority of NTC is to provide basic telecommunication facilities to the public at reasonable prices, in the present context it has also to cope with the demand of customer for better and new services. The rural people in one hand wish to have services in their villages, and on the other hand the urban people expect the new service to land at their doorstep. In recent years, the telephone demand has swollen-up rapidly in the cities as well as the villages directed towards the urbanization. Up to 2062, public subscriber telephone network (PSTN) capacity was 537638, number of waiters still waiting for a telephone line was 313107, where as the NTC has only distributed 448639 access

capacity, and of local (PSTN) exchange 202 during the period. The penetration of telephones in Nepal still stands about 5 per thousand of the population.

Thus the huge gap between demand and NTC's existing capacity has increased the public dissatisfaction to a large extent. Still, there are many waiters those waiting for a decade to have a telephone connection to their home and on the other hand, the customers, who are using telephone service from last few years, are facing various problems like delay on shifting it from one place to another, delay on maintenance, billing of telephone call sets. Also the opening of distribution area is also inconsistent and the distribution policy not properly matches with the public want and desire. Since the world today is using very new and recent technologies in the field of communication service, Nepal too is not exception to this. Thus in recent years the people of few cities specially Kathmandu Valley, Biratnagar, Birgunj Pokhara Nepalgunj, Dhangadhi, Bhairahawa, Janakpur etc. due to extensive urbanization as well as the cities being hub of all economic activities are demanding advanced communication facilities. In the context of fulfilling such demands, NTC is introducing "GSM Mobile Service" as a new service in Nepal from dated 2055 BS.

In course of providing new services, how NTC is marketing its new service? What pricing and promotional strategies has NTC adopted? What is the market response to its mobile service offer? And what is the level of customer satisfaction or dissatisfaction of mobile telephone users? Are the areas of interest for investigation that is yet unsearched for? Addressing there key issues, the present study tiers to answer the above questions.

1.4 Objectives of the Study

The objectives of the study in connection with the forgoing problems are as follows:

- To find out marketing approach of NTC for marketing and promotion of mobile telephone.
- To investigate the level of satisfaction of customer of mobile telephone services.

- To identify the reasons/factors responsible for customer satisfaction or dissatisfaction of mobile telephone services.
- To point out the suitable suggestions for the future improvement.

1.5 Importance of the Study

Since the subscribers or users of mobile telephone can take many facilities than the ordinary telephone subscribers, the importance of mobile phone is continuously increasing. The number of mobile phone users within thirteen years (1992-2005) on the world has gone up to two hundred million, which proves the popularity of mobile phone. The increasing demand and popularity of mobile telephone is attracting the attention of investors to invest in these areas. For communication through telecommunications, His Majesty's Government (HMG) of Nepal also established a separate body named "Nepal telecommunications Authority" on Falgun 2054, and transformation from NTC was dissolved and concerted to Nepal Doorsanchar company limited (NEPAL TELECOM) from Baisakh 2061. Now this Authority is making rules and regulations and it has started to invite and register private parties for the distribution of new communicant services like Pager, WLL, Mobile phone, CDMA phone etc. Recently NTC has given permission to Spices Nepal Pvt. Ltd. for the commencement of mobile telephone into Nepalese market and this group has begun its services.

Therefore at one side NTC is effectively operating its activities in distributing the new communication services to fulfill the growing demands of customers and on the other side, many private parties are in the process of introducing their services into the Nepalese market. So, it is that NTC will have to face cutthroat competition with outside competitors in coming future. But, to get success in such a situation, this study provides valuable guidelines to NTC in making their new strategy in providing qualitative service. Similarly the other outside invertors or private parties may also be benefited from the information included in this study. It will also provide valuable inputs and references to the scholars and researches

who are interested in conducting further researches on the field of communication service.

1.6 Limitation of the Study

This research is the requirement for the partial fulfillment of master's degree in management. The researcher being a student and having a limited time and resources, this research work is not free from limitations which are as fallows:

- This study is mainly based on primary and secondary data; primary data were collected from the Mobile telephone users of market response and consumer's satisfaction or dissatisfaction through the questionnaires.
- Secondary data were collected from the various periodicals published by Nepal Telecom library as well as the T.U. Journal of Central Library Kirtipur.
- Similarly the study was only focused on mobile Telephone services.

1.7 Organization of the Study

Keeping the above objectives in mind the present study has been organized in the following five chapters.

Chapter 1 Introduction is an introductory part and explains major issues. Chapter Two Review of Literature deals with review related and pertinent literature, especially the historical background of communication service, its development in Nepalese context, and recently available communication services. Review of books, journal, articles, internet search and past thesis related to study topic are considered. Chapter Three Research methodology is about research methodology and deals with research design, population and sample, data collection technique, data processing techniques and methods of analysis. Chapter Four Data presentation and Analysis of Data is the focal part of the study, deals with presentation and analysis of data? Under this chapter, the researcher has analyzed the data by using the tools designed in forth chapter and the major finding of the study has been presented. Chapter Five Summary Conclusion and Recommendation consists of summary, conclusion and recommendation. In

addition to this, extensive bibliography, questionnaire and appendices have also been incorporated in the present study.

CHAPTER-2

REVIEW OF LITERATURE

2.1 Historical Background of Telephone Services

The man compelled to take help of birds to dispatch their messages is now able to get, see and listen all information of world by sitting at a small place; so that length of thousands kilometer is shrinking to meter and centimeter. All these strangeness and wonderful achievements are presents of science and technology. Discovery of first telephone by Alexander Grahmbell of Scotlandin 14th February 1876 has given a miracle. With its first exhibition in Philadelphia its mass production started from America. After the commencement of mass production of telephone, its importance gradually increased, as a result, telecommunication offices were established by almost all the countries of the world. To make unity, integrity and coordination in between many countries in field of communication and to increase self-dependency in providing communication services, International Telecommunication Union (ITU) was established in 1934 that amends international rules, regulations and policies related with radio, telegram and telephone. From 1947, it is conducting its activities as a special agency of UNO, now with more than 160 member countries including Nepal.

2.2 History of Telecommunication Services Development in Nepal

The history of telecommunication services in Nepal can be categorized as below:

a) Initial Stage (Prior to 2013 BS)

It was during 1967 BS, the Rana Prime minister first introduced telegram service and after three years in 1970, they used magneto telephone for their own use. Such services were not available for other Nepalese citizens. The further developments have been presented chronologically:1970 B.S. - Establishment of magneto telephone services in Kathmandu; 1971 B.S. - Establishment of open wire Trunk link from Kathmandu to Raxaul (India); 1991 B.S. - Rules and regulation related with telecommunication services named "Sawal Act" was published; 1992 B.S. a) Installation of and Automatic Exchange having 25 line

capacity in palace. b) Establishment of open wire Trunk link from Kathmandu to Dhankuta; 1994 B.S. - Trunk Telephone Link between Birguni and Rajbiraj; 1995 B.S. - Trunk Telephone Link between Birguni and Raxaul, 1998 B.S. - Trunk Telephone Link between Birguni and Dhankuta and Biratnagar, 2005 B.S. - a) Introduction of High Frequency Radio system. b) Installation of first Nepal Telegram office as 'Mohan Aakashbani, -2007 B.S. - Establishment of CB telephone exchange having capacity of 100 lines in Kathmandu; 2008 B.S. - Installation of open wire Trunk line from Kathmandu to Palpa, which was further, extended to Butwal, 2012 B.S. - Establishment of Manual Exchange having 300 line capacity from which distribution of telephone service to general public started.

b) Middle Sage (2013 B.S. to 2027 B.S.)

From 2013 B.S., His majesty's Government of Nepal (HMG/N) had given topmost priority for the economic development of the country and in this connection; it has implemented the "Five Year National Planning". Since the economic growth of the country largely depends on trade and commerce, and it's continuity as well as success of such trade and commerce largely influenced by the electricity, transportation and communication facilities available in the country, every five year plan have given more emphasis for the development of these sectors. Therefore, while studying the development of communication services, it is batter to study according to the growth of national five year plans.

i) First Five Year Plan (2013-2018 B.S.)

During this planning period the different progress related with communication services were achieved. These included The "Telecommunication Department" establishment in 2016 B.S.; installation of a separate telephone exchange of 120 line capacity in Singh-Darbar in 2017 B.S. through which telephone service was distributed to the central office secretariat; extension of telegram to 28 districts with 1000 lines at the end of the first FYP.

ii) Second Five Year Plans (2019-2002)

During this planning period, the following works were completed:

In 2019 B.S. an Automatic Exchange of 4000 lines capacity was installed in Kathmandu. Another most important thing done in this period was inauguration of national telecommunication service and International trunk service by late king Mahendra on 15th Ashadh, 2021 B.S. During that period, Delhi and Calcutta of India were linked directly from Kathmandu with the help of telephone and teleprinter. In 2022 B.S., a Manual Exchange of 300 lines capacity was installed in Biratnagar (outside the Kathmandu valley). In the same period, Rawalpindi of Pakistan and Dhaka of Bangladesh were linked by telephone. At the end of second planning period, telegram service was available in 58 different places of the kingdom with the help of SSB Radio communication established by the help of India and America.

iii) Third Five year plan (2022-2027 B.S.)

During this planning period, following works were completed:

- In 2026 B.S. HMG/M has established a separate organization named "Telecommunication Development committee" (TDC).
- In this period, 3000 telephone lines were added into central Exchange and another separate exchange of 600 lines capacity was installed in Patan (Lalitpur).
- Mumbai of India and Kathmandu (Nepal) were linked by telephone in 2026 B.S.
- At the end of this third planning period, the survey for the establishment of "Microwave communication system" was completed.

c) Modern Stage (After 2028 B.S.)

Up to 2016 B.S., the extreme topography and weak infrastructure as well as the lack of resources made task of providing basic telecommunication services in the country more difficult so that the growth of telecom services up to that period was rather slow. At that time, the Telecom Department had to cope with the demand of

the customers for better and new services. Thus for the development and expansion of telecom services in the kingdom, the Telecommunication Development committee (established on 2026 B.S.) started to make and implement the phase-wise Development plans with the world Bank loan assistance. The development works undertaken during different phases of Telecom Development project were as follows:

i) The First Phase Project (2027-2032)

In 2028 B.S., the "Telex service" was first introduced in Nepal. In the same year, Telecommunication Training center (ITC) was established into the boundary of Pulchwok Engineering Institute with the help of UNDP and ITU. To make the distribution system more systematic and judicial "Communication Corporation Act 2028" was published on 20th Chaitra 2028 B.S. In 2029 B.S., various telecom exchanges were established in Birgunj, Hetauda, Malangawa, Bhairahawa and Pokhara having telephone line capacities of 300, 200, 50, 100 and 100, lines respectively. Similarly in 2030 B.S. an exchange of 200 lines capacity was installed in Nepalgunj. Other few exchange having capacities of 400, 200 telephone lines were installed in Dharan and Janakpur respectively and 100 lines each in Bhadrapur and Rajbirai. In the same time domestic microwave transmission link was also established. At the end of first phase project period, the number of telephone lines in the country reached to 9810 "(8300 automatic and 1510 manual)" (Shakya M.K 1996)

ii) The Second Phase Project (2032-2037 B.S.)

At the earlier of this project i.e. on 1st Ashadh, 2032 B.S. the previous JDC was converted into Nepal Telecommunications corporation (NTC). During this phase NT introduced telephone Services in Banepa, Bkaratupr, Butwal, Dhankuta, Kalaiya, Mahendranager, Surkhet and Tansen.

The main achievements of this project were:

- Duplication of Microware Transmission links (MTL) installed during the first phase project and installation of new MTLs in the Western Nepal to link

Kathmandu with important places like Bharatpur, Bhariahwa, Butwal, Tansen, Nepalgunj and Surkhet.

- The total lines distribution at the end of second phase increased up to 15590.

iii) The third Phase Project (2037-2042 B.S.)

The third phase planning project introduced the drastic changes in the telecommunication services since it provided the following achievements:

- Provision of satellite Earth station at Balambu (Ktm) in October 1982 A.D. that significantly improved the quality of the international telephone service. Some automatic services became available in the international telephone service; where by the operation in Kathmandu could dial overseas countries directly.
- Introduction of Digital switching system and Digital Transmission system in the telecom network of Nepal.
- Establishment of own TTC building at Babarmahal, Kathmandu.
- Introduction of Subscriber Trunk Dialing (STD) in 1986 AD, and International Subscriber Trunk Dialing (ISD) in 1987 A.D.
- The process of digitalization of manual exchanges started. As a result, 22500 digital telephone exchange lines were added, including 3220 lines used to replace the manual telephone exchange lines.
- At the end of third phase project the total number of telephone line distributed reached up to 34870.

iv) The Fourth Phase Project (2042-2047)

During this phase the capacity of existing digital exchanges were increased. Almost all the manual exchanges (except four manual exchanges installed in Gaur, Siraha, Malangawa and Dipayal) were replaced by the digital exchanges.

Similarly transmission links were added to link:

- Kathmandu with Janakpur Rajbiraj and Birtangar.
- Bhadrapur with Ilam.
- Biratnagar with Itahari Duhabi Dhankuta and Rangeli.

- Rajbiraj with Lahan and Siraha.
- Janakpur with Malangwa and Jalewshewar.
- Nepalgang with Surkhet.
- Dhangadhi with Mahendranagar.

The most remarkable achievement during this project is the penetration of telephone services in the rural areas by digital multi access radio telephone system (MARTS) and digital radio links were established to provide the telephone service in the rural areas of Nepal. During this phase 43500 lines were added and total lines increased up to 78250.

v) The Fifth Phase Project (2049-2054)

Compare to previous projects the fifth phase project was very ambitious because Nepal Telecom ascertained the following objectives.

- To increaser the line capacity in both the urban and rural areas to 243000 lines, thus improving the overall telephone density.
- To put equal emphasis on the expansion of services in urban as well rural areas in order to improve the ten densities in the rural parts of Nepal.
- To upgrade the main (East west Microwave) link of 140Mb as well as to introduce optical fiber network in Kathmandu valley and few other parts of Nepal where the traffic is high.
- Overall, this fifth telecom project aimed to achieve the following:
- National telephone density 0.9 percent
- Expansion of C-Dot exchanges mainly for rural areas.
- Rural telephone density 0.05 percent.
- Total number of VDCS with at least one public calls office (PCO) to be 1200.
- Ten densities in the Kathmandu valley to be 10 percent.
- To achieve 100 percent digitalization of the telecom network.
- Increase of international circuits in A-type Earth station.
- Establishment of centralized operation and maintenance center in the Kathmandu Valley to centralize all new digital exchanges.

- The progress during fifth phase planning was as follows:
- 61000 lines were added and the total number of distributed line reached 141000 and capacity of exchanges reached to 243000 lines.
- A new satellite Earth Station (A-type) was installed and put in operation from March 1996. Similarly, new national/ international Gate-way exchange was installed at Jawalakhel, Lalitpur in October 1996.
- International Circuits capacity increased up to 720 lines from two international Gate-way exchanges.
- There were 607 MARTS terminals 8 V-Sat terminals and 9000 rural subscribers. (NTC Annual Report,1996/97)
- The numbers of villages using telephone were 1200. Twenty-seven districts not linked by telephone before this phase were connected.
- The national telephone density al the end of this phase became one percent.

vi) The Sixth Phase Planning (2054-59)

According to the HMG's ninth national plan, NTC was continuing its efforts to expand and improve its service throughout the Kingdom of Nepal. In addition it planned to introduce value added service to cater for new market which is demanding more flexible and quality service in both wire-less and wire-line network in all three facets of communication namely voice, data and video.

One of the major aims of the projects was to provide "On-Demand" telephone in all major centers. For this telephone infrastructure was planned to increase by 300000 lines on top of the existing 243000 lines. Thus, it was hoped that the current waiting list of 254000 will fall to zero once all the lines were distributed. (NTC Annual Report1996/97)

This Project has been divided into three year program (1997-2000) and two year program (2000-2002). This division was especially done to make strategic investments hoping that the mobilization of necessary funds and resources for the three years program will be much easier than for five year. Beside these factors, the imminent privatization of Nepal Telecom and HMG's policy to bring in private operators in the market will also have various financial impacts which

could be assessed after three years more accurately, enabling NTC to push beyond 2000 A.D. more smoothly. (NTC Annual Report 1995/96)

The objectives of NTC's Sixth phase project are as fallows:

1 To provide on demand telephone Services in all major cities.
2 To increase the national telephone density at least 2.5 percent.
3 To provide at least one PCO in additional 1800 VDCS.
4 To install telephone exchanges in all district headquarters and in all major commercial centers.

The progress during sixth phase planning was as follows:

1. Nepal Telecom distributed 327673 telephone lines including 201900 new and 35000 substitutes lines during the period of ninth plan and the telephone density been increased to 1.4 per hundred people. Nepal telecom has distributed more than 22000 mobile lines and preparations were to give license to private mobile services providers.
2. There has been an encouraging involvement of private sector in providing additional telecommunicate services line e-mail and internet and limited pay-card phone services was in operation.
3. The telephone services were extended to 1761 VDC's by the end of ninth plan, where as the service was available only in 1200 VDCS in the beginning of the plan. Nepal Telecom extended telephone services to additional 600 VDCS during the plan period. As the process of awarding operation licenses for mobile services and basic telephone services to the private sector was in final stage, they were not operating their services.
4. As per the program of establishing rural exchange with the 150 to 300 lines capacity in the developing rural areas, 57 such exchanges were established and they begun operation.

vii) The Seventh phase planning (2059-64)

According to the HMG'S tenth plan, Nepal telecom is a highly ambitious and challenging project targeting to provide telephone connection on demand through out the country. This project aimed to cover 100% of VDCS excluding the remaining VDCS in Eastern Development Region and raise substantially telephone penetration to 6.5%. By the end of Tenth plan, capacities of different systems were expected to be as follows:

Table -2.1

System	Capacity at the and of Tenth Plan
PSTN	750000
GSM MOBILE	500000
CDMA	500000

Source: Nepal Telecom Annual Report, 2002/03, p. 8

In order to meet transmission link for the additional switch capacity, national backbone link will also be established. A telecom superhighway of capacity 622 Mbps (7560 circuits) along the East-west Highway is being established with grant assistance from government of India. An alternate satellite network connecting major destinations in the country will also be established through projects like RSAT, DSAT, VSAT, etc. The plan also encompasses the leading value added services like VMS, PCC, PCL, ASDSL, etc in order to cater ever-increasing customer expectation. With tremendous expansion of capacity and network readiness, Nepal telecom aims to adopt progressive marketing strategies to exchanges its competitiveness for providing services at affable price by the end of this ambitious tenth plan.

The objectives of NTC's seventh phase project were as follows:

1. Expansion development and operation of information and communication sector to the rural areas, as a basis of socio-economic development with the massive participation of private sector with due stress in the expansion of information technology.

Major quantitative targets:

a. Extending 40 line telephone services to every thousand people.

b. Extending telephone services in all VDC's of the country.
c. Extension of telephone services to all VDC's.
d. Extending mobile telephone services to 170000 lines.
e. Intending/e-mail services would be expanded to additional 31 district headquarters.
f. All these are the historical progress of telecommunication services up to this time. Now in the running seventh phase, Nepal telecom begins the new service like mobile phone, CDMA phone. The historical development of mobile phone and its introduction in the Nepalese context is described below:

2.3 Origin and Development of Mobile Phone

In 1921 A.D., the Detroit Polices of USA conducted first experiment with mobile radio. "The possibility of utilizing radio devices for two-way mobile communications with moving vehicles was well appreciated during the second world-war and that gave the rural impetus to mobile communications technology. However the technologies available at that time limited the number of customers that could be supported and hence only specific authorities like Police Departments used the system". (Gautam B., NTC 1996)

Although the history of mobile communication dates back to 1920/21 its growth took place only in last two decades. During the decade of 1970s, more advanced systems emerged and mobile communications started to become a common utility. In 1979 A.D., the world's first analog cellular was implemented by NTT, Japan. Similarly in 1982 A.D. the first American commercial cellular system was turned on in Chicago. Because of poor performance in the earlier analog technologies led to the development of more advance digital cellular technologies and "GSM is one of them. Actually GSM refers to the GLOBAL System for Mobile Communication" which was the first digital cellular system and it was introduced in Germany during 1982 A.D. and only then its commercial operation began in full fledge. Although it was initially developed in a European context it

has rapidly gained acceptance worldwide. According to March 2003 figures form GSM Association, there is a current bare of more than 100 million customers spread across almost 350 networks worldwide. (Nepal Year book.2004)

In Nepalese context, Nepal Telecom started the operation of GSM cell wire mobile on 14th April 1999 by establishing a GSM 900 MHZ, network having capacities of 10000 subscribers with equipment from Nortel Networks. Its commercial service has begun on 15th May 1999. The Mobile Switching Center (MSC) and Base Station Controller (BSC) are locates in International Gateway Exchange Building, Lalitpur. Twenty-six cell sites are located across Kathmandu Valley, Pokhara, Birgunj's and Kathmandu and three each in other three cities. Anybody who subscribe to GSM services at any one place can make or receive all types of local and long distance calls from any of above mentioned cities with their own mobile set.

In recent days this service has been expanded to various major cites throughout the country. More BTS were added making a total of 119 (including 75 BTS in Kathmandu Valley). At present, the total mobile subscriber in the country is reaching a 248820 landmark (including 201998 in Kathmandu valley). Mobile subscribers continue to avail services such as voice, Fax, Data (up to 9.6 kbps), Voice Mail system (VMS), short Message Services (SMS), national and international roaming services. By end of July 2003, GSM cellular mobile coverage was extended along the highways from Kathmandu to Pokhara, Kathmandu to Bharatpur, Bhairahawa region, Nepalgunj region in the west and to Kakarvitta in the East. Hence, all the neighboring towns along the highway had GSM coverage. Together with the expansion of the coverage area of the mobile services, the subscriber capacity increased to 75645 lines for post paid and 173175 lines pre-paid services since 2061 Magh. (MIS Report 2062)

In future Nepal Telecom has planned to expand mobile capacity to reach 500000 lines at the end of Tenth plan. (NTC Annual Report 2002/03)

2.3.1 Mobile Station and SIM Card

The main attraction of GSM system is its low cost, low power and handheld terminals. The intelligences of mobile terminals lines are SIM card. The GSM subscribers are provided with a SIM card with its unique identification at the very beginning of the service. The subscriber is identified to the system by this very SIM card. SIM cards have provided a considerable amount of flexibility to the subscribers since they censure any GSM mobile terminal to access the network.

2.3.2 Services in the GSM Mobile phone

GSM was designed having interoperability with ISDAN in mind and the services provided by GSM are a subset of the standard ISDN services. However, because of the radio transmission limitations, the same channel rate as ISDN cannot provide services in the GSM can be categorized in three ways:

a) Tele services:

It covers regular telephone that enables speech call to be placed between GSM users and any telephone subscriber connected to any other telephone network worldwide.

b) Bearer services:

These services are also called data services use to receive or send various data that should have the standard rates of up to 9.6 kbps. GSM wire can access to internet with a suitable interface to their computer.

c) Supplementary services:

Supplementary services enhance the basic services available to the subscribers. It modifies or supplements basic telecommunication services. Consequently it can not be offered to a customer as stand alone service some of the supplementary service provided are:

1. Calling line Identification Presentation (CLIP): Subscriber will get this facility as the subscriber for Mobile Telephone. In this facility when incoming call is ranging the calling telephone number will be displayed at your mobile hand set and either you receive or reject the calls as per your preference.

2. Call forwarding service: Any GSM subscriber can transfer the received calls of his mobile phone to any mobile or other numbers of fixed networks.
3. Call waiting service: The GSM subscriber can give signal or can request the third party when he is dialing the same number at the time of two-way conversation is in existence.
4. Call hold: You can put call wait feature either on or off. But first you have to fill up the form and submit to customer care unit at Nepal Telecom Jawalakhel to have this facility.
5. Multi Party service: The GSM subscriber can talk or make provision of talking with two other telephones at a time.
6. Short Message service (SMS): A services available on digital network, typically enabling message up to 160 characters to be sent the message to other mobile telephone number. The called mobile telephone number will hear ring and message will be displayed which he can read.
7. Voice mail service (VMS): The voce mail system in general provides a store and forward medium for voice massages. Voice and fax massages can be stored at the voice mail for the later retrieval by the owner of voice mail, in case the user is busy or out of reach. A caller may wish to directly access the voice mail in case he does not want to disturb the mobile user.
8. National/International Roaming: National and International roaming capabilities have been regarded as a major factor behind the huge success of GSM system. GSM users can carry their mobile (or SIM card) to any other cities or country where GSM network is operated and can make or receive calls with his, own mobile.

2.3.3 Characteristics of Mobile Phone

- Very simple in connection due to its wireless nature.
- Easy in repair and maintenance due to it's less distractive characteristics.
- No necessary of shifting when migration of resident takes place.
- Complete provision of secrecy (no any person can interfere and no other electronic equipment like FM radio can catch it's waves or frequency)

- Complaints like billing system due to use of card less telephone will not exist in mobile service.
- Persons having mobile set can receive/transfer his calls easily if he/she is in the radio frequency areas.
- Regular, secure and reliable service.
- Hot billing facility i.e., subscribers can take their telephone bill after two hours if needed.
- The mobile subscriber can take or use all type of communication services from domestic as well as international GSM coverage area by using their own telephone number and set.
- The person having mobile set if unsuccessful to contact another concerned mobile, subscriber, can dispatch short massage, record his voices and can use voice mail.
- The person who dials telephone as a bluff-call will be-be-motivated or demoralized to repeat such activities since his telephone number will be displayed on mobile set.
- If mobile subscriber losses his SIM card, he can dial emergency call without it.
- Subscriber, who dials telephone as a bluff-call will be de-motivated or demoralized to repeat such activities since his telephone number will be displayed on mobile set.

2.4 Present State of Communication Services in Nepal

To know the present state of communication service in Nepal the secondary data is taken from the various periodicals published by Nepal Telecom as well as the T.U. journals of central library, Kirtipur. Thus data related to this objective are presented below:

2.4.1 Installation of Telephone Exchange, Distribution and Waiters:

When Telecommunication service first introduced in Nepal i.e. during 1970 B.S. the distribution of telecommunication service was not for the development of Nation but was for the luxury of the Rulers or for the Rana family. Nepalese

people have got the opportunity of using such facilities only from 2012 B.S. Since then the attraction towards it was gradually increased.

The following figure of last the phases shows the growing pattern of telephone demand.

Table No. 2.2

Statement of Installed Capacity, Distribution, Waiters and Man Power

Title	**4th phase**	**5th phase**	**6th phase**	**7th phase run**
	2047 Ashadh	**2054 Ashadh**	**2059 Ashadh**	**2062 Jestha**
Installation	71620	200884	389400	537638
Distribution	51931	153782	327673	448639
Waiters	62186	246558	317293	313107
Man power	3494	4213	4687	5724

Sources: NTC's "First Anniversary Souvenir, 2005", p. 88.

The above presented table clearly shows that average number of waiters increased per phase is 83,641. Similarly the average capacity of telephone lines and the average distributed per phase are 1, 35,340 and 1, 32,202 respectively. Likewise the ratio of waiters to NTC's telephone line capacity is 0.53:1. The working manpower during 4th phase (2047 Ashadh) 3494 and 7th phase (2062 Jesth) is 572.4. It indicates that one man-power was engaged for 15 lines during 4th phase (2047), where as the some manpower has to handle 78 lines on 9th phase (2062). Therefore on the basis of above analysis, we can say that the existing exchange capacity can easily meet the existing number of waiters if adequate number of manpower is recruited and if they make well trained.

2.4.2 Classification of Exchanges

There are various types of exchanges operated by Nepal Telecom. The following figure clearly shows their types, number of capacity and the distribution through them.

Table No. 2.3

Classification of Telephone Exchanges Installation and Distribution

System	E-10B	EWSD	C-DOT	J-Rack	Total
Number of exchanges	53	37	45	67	202
Installation of Tel. line	81294	234185	8356	213803	537638
Distribution of Tel. line	59407	207369	6748	775115	448639
Distribution %	73.08	88.55	80.73	81.9	83.45

Waiter = 313107, Sources: NTC's MIS Report, 2062 Jestha 203issue 17 year p.8.

2.4.3 Existing Communication Facilities Provided by NTC

Nepal Telecom from the very beginning of its establishment is providing basic telecom facilities throughout the Kingdom of Nepal as well as developing its telecom links with the rest of world. The various services provided by NTC at present are as follows:

a) Basic Telephone Service

Nepal Telecom has been augmenting telephone exchange capacity in order to satisfy the ever-growing demand for telephone lines. "With 202 operational exchanges in 71 districts the service is now available in all 75 districts of Nepal. The total installed telephone capacity has reached 537638". (MIS Report 2062) Nepal Telecom is adding optical fiber transmission link towards to its network, which has resulted in more reliable and improved voice, quality.

b) National Trunk Telephone Service

Although "East west optical Fiber SDH project is believed to provide quality national trunk service, the importance of microwave network cannot be underestimated in the rough terrain like Nepal. Until now broadband microware network is serving to handle national trunk, which consist of 140 mbps main Link in the west and SDH STM 1 network together, with 34+34 mbps link in the east. The main link network is made up of complex network: spur links mainly of

2mbps and 8 mbps. The 71670 trunk circuits available by this network have enabled Nepal telecom to provide telephone service to more than 1963 VDC's and metropolitan centers and major towns. (NTC Annual Report 2002/03)

c) Rural Telecom Services

As Nepal is a hilly country most of the area is surrounded by mountain and Himalayas. About 90 percent people live in there areas. There is neither road facility nor adequate communication means. To carry them under the unity and integrity rural telecommunication facility plays an important role and by realizing the same fact NTC has been providing rural telecommunication services by various modern technologies. NTC has served most of the town-oriented villages by establishing C-DOT exchanges; likewise it is providing basic telecommunication services by installing several MARTS Repeater Station. The following figure presents the current situation of rural telecommunication service.

Table No.2.4

Rural Telecommunication Service

Description	Numbers (on Jestha 2061)	Numbers (on Jestha 2062)
Rural station (JTCA)	3	3
JICA subscriber	69	70
High frequency	6	4
Marts terminal	504	539
Marts repeater	93	92
Marts subscribers	3001	2758
VHF subscribers	1074	1034
VDCs coverage		
by Telephone	1919	1963

Sources: NTC's MIS Report, 2062, Jesth, 203 Issue 17 years, p.2.

The above presented table clearly shows that marts terminal increase and MARTS, VHF distribution is reduced due to the lives shifted to new C-DOT exchanges.

a) International Telecommunication Services

With the ever-increasing international contacts for business enterprises and individual alike as well as for the promotion of tourism and other industries, the importance of international telecommunications is constantly growing. NTC as the sole provider of international telecommunication services in Nepal is constantly enhancing the international telecommunications network.

The main outlet for Nepal's international traffic is the satellite link accessing the primary path Intelsat satellite over the Indian Ocean region. Nepal is a signatory to INTELSAT. Nepal is also connected to INDIA via a coaxial system at the borderland interlinking the microwave network of both the countries. An UHF system links Nepal with Bangladesh.

b) International Trunk Telephone Service

International Subscriber Dialing (ISD) service is available to all countries, with some 2518 international telephone circuits in operation (including 631 microwave circuits with India and 12 with Bangladesh). The following international telephone circuits are operational on satellite and microwave system as of Jestha 2062.

Table No.2.5

International Trunk Telephone System and their circuits

Systems	Circuits
Satellite	1875
Microwave	643
PSTN Circuits	1868
Non-PSTM circuits	7

Sources: NTC's MIS Report, 2062 Jestha 203 Issue, 17 Year, p.28.

c) V-SAT Service

To provide long distance telecommunication facilities in the remote district head quarters, especially in the Himalayan region, where microwave. VHF and multi-access radio telephone system (MARTS) are neither technically feasible nor

economically viable, VAST (very small aperture terminal) technology is being used. In addition to this district head quarters, VSAT terminal is used to provide telecommunication facilities in the tourist sports, projects sites and on demand basis.

Nepal Telecom has been providing telecommunication services by V-SAT equipment. Each V-SAT terminal has a capacity of 4 circuits. The V-SAT services provided by Nepal Telecom have altogether 153 stations and 361 subscribers.

d) WLL Service

WLL (Wireless in Local Loop) services are also a new technology used in the field of telecommunication. Although at present, it is not available in Nepalese market. Yet NTC is new introduced from 2057/58."Under WLL system 165 lines are distributed including 67 lines in Nawalparasi, 62 lines, in Rupandhi and 15 lines in Kapilbastu district". (NTC Annual Report 2001/02)

e) Telex Services

The Telex service provided by NTC is fully automatic. Telex service operates through 51 satellite circuits and 12 microwave circuits. At present, a telex exchange of 768 line capacity serves 256 telex subscribers in 8 locations of 7 districts. Telex service is available from Kathmandu, Janakpur, Birgunj, Biratnagar, Bharatpur, Butwal, Bhairahawa, Nepalgunj, Pokhara and Dhangadhi. Nepal has district Telex- link with 7 countries, 8 destinations. It provides international telex services to more than 200 countries. The following data of last the year presents the distribution trend of telex service.

Table No.2.6

Telex Service

Title	Jestha 2061	Jestha 2062
Location	9	8
Districts	9	7
Telex capacity	256	256
Distribution	145	122
International Telex Circuits in operation	54	54

Sources: NTC's MIS Report, 2062 Jestha: 203 Issue 17 year p.2.

The comparative table presented above shows that telex service is facing a downward trend and it is due to the commencement of the facsimile service.

f) International Telegraph Services

International telegraph service is available to all parts of the world through satellite and optical fiber links. Nepal has direct telegraph circuits with India and Japan.

g) Pocket Switched Public Data Network

Pocket switched service is a data communication network for reliable accurate, efficient and cost effective means of transferring and accessing information. NTC has been providing data communication services from 1995. The services are either of dedicated type or dial-up access type. At present there are 17 pocket switched subscribers.

h) Card Phone Services

Nepal Telecom is providing advanced card phone services which is remotely supervised by a central management system. The operation of a card phone system has not only proven to be of a high quality service to the public, it has also generated a considerable amount of revenue of Nepal Telecom. In total the system is generating 16-20 lakh rupees per month.

Nepal telecom has started integrated type of card phone system consisting of modern public terminals for both indoor and outdoor use since Aswin 2058. The service is gaining popularity, and so far has extended up to 351 terminals. However card phone service still needs to be extended to other public places such as private nursing homes governments offices dealing with public interest, markets and busy Chowks.

i) E-mail and Internet Services

Nepal telecom has been providing e-mail and internet service to its customers in Kathmandu valley since year 2000. Internet billing system has been operational since last year. Keeping in view the amount of valuable time of its customers wasted in long queues just to get their monthly telephone bill statement and avoid delays in bill payments, NTC has been providing service to view the monthly (PSTN) telephone bills online on the net since October 2001. Monthly bill for all mobile telephone subscribers have also been put on the internet since January 2002. Number of subscribers utilizing these facilities is on the rise everyday. "At presents a total of 3,670 internet user and 1917 e-mail user have registered to this service". (MIS Report 2062)

j) GBM (Mobile Service)

Ministry of information and communications HMG Nepal has given permission to NTC for operating land mobile communication services. As personal mobile satellite services become more widely available and equipment becomes smaller and cheaper, NTC has decided to export its services using 'Inmarsat terminal.' In this regard, NTC has introduced this service from the starting of Baishak 2056. The more details about mobile telephone services are described on the coming chapters.

2.5 Review of Related Studies

2.5.1 Global perspective on marketing and product satisfaction

Ranched (2001) has explained marketing as the practice, which is now busy integrating the potential of information and communication technologies through

the utilization of databases. However, his research has not been able to deal with marketing approach of the mobile telephone. Instead, mobile telephone marketing has earned the reputation of being the most forward-looking, and one of the most efficient, ways of building and strengthening brands.

Desmules (2002) has explained the impact of the variety on consumer happiness. He has provided the impact of marketing strategies on general happiness. He has discussed the points of satisfactions; however, the researcher has not the scope of description of telecommunication marketing and consumer satisfaction through this research. Educating consumers and providing information have been found to be points for satisfaction and these could be the same for mobile telephones. Similarly Mitchel et al. (2000) has dealt on Systematically Varying Consumer Satisfaction and its Implications for Product Choice. The research has found that satisfaction with one product is a good reason to try an alternative, and it might be difficult to discern whether variety seeking or a desire to increase satisfaction is the goal. This could be further associated with the mobile telephone use.

Gauzente (2001) presents three aspects of time affecting market orientation. Initially one has to consider the time taken to implement a market oriented strategy. Lagged, threshold and cumulative effects occur over this implementation period. These can influence the relationship between market orientation and performance. Time as signified by the age of a firm impact on its strategy and its ability to change. This can either inhibit or facilitate the development of market orientation. Lastly, time is history and represents the specific, dated context of a firm. The historical context, such as early or late entry into a market can affect adoption of a genuine market orientation. NTC has to keep the lessons from these researches for developing the market orientation.

Ben Petrazzini (2001) indicates that the new pricing scheme offered by emerging IP telephony Services is another important component affecting the current regulatory and pricing regime in mot markets. As data from the different countries show prices for IP Telephony have turned out in most case to be between 30 to 50

percent lower than for traditional voice telephony. Consequently they are posing serous challenges to the conventional services of traditional PSTN carriers.

2.6 Review of Past Researches in Nepal about the Telecommunication Services

In order to understand the growth of communication services, present status of telecommunication services and other information about the telecommunication facilities, the researcher found a very few researches that have been completed on "Telecommunication services on Nepal." These researches were mainly concerned with the economic aspect of NTC. Following are the researches on Telecom services of NTC.

2.6.1 "A Study on Economics of Telecommunication in Nepal"

"A study on economics of telecommunications in Nepal" was done by integrated development systems (IDS) in 1980. The main objectives of the study was to examine the demand and supply of telephone lines investment of telecommunication sector and the fixation of tariff as well as pricing policy of NTC. For this purpose the secondary data of NTC from 1969/70 to 1979/80 were thoroughly analyzed with the help of various statistical tools. The major finding of the study was as follows": (Economics of Telecommunications in Nepal 1980)

1. In Nepal, telecommunication facilities were started in 1913 AD as a luxury of Rana Rulers. But concerned efforts to develop telecommunications were undertaken only in 1956 A.D. At present, Nepal Telecommunications Corporation (NTC) has been providing telecommunication facilities for both domestic and international usage.
2. Investment in the telecommunication sector in Nepal is one of the lowest in the world. During 1970/71 to 1977/78 on an average, only 0.05 percent to GDP was invested in the Telecommunication sector.
3. Telephone density in Nepal is one of the lowest among countries where local telephone facilities are available. In 1969/70 telephone density of total

expressed demand 0.02 per 100 people. It was increased to 0.15 in 1979/80 but it is still on of the lowest in the world.

4. During the decade 1969/70 to 1979/80 the local telephone facilities (both the exchange capacity and the subscriber's connection) have increased along with the total expressed demand. But the exchange capacity has increased relatively at a lower rate then the total expressed demand. Therefore the gap between demand and supply promises to be wider and wider though time unless the supply increase at a faster rate than in the past.
5. In Nepal, prior to 1969, in the absence of a concrete pricing policy, tariffs for telecommunications services were fixed arbitrarily, however between 1969 and 1976 pricing seems to have been based mainly on tariffs in the neighboring countries and the result of discussion between HMG and international financing agencies. The concept that the pricing policy of the corporation must be with internal resource generation was accepted only in 1977 which led to steep rise in the tariff in July 1977.
6. Before 1976, NTC had no explicit distribution policy; however, while distributing 300 new telephones in 1976, some priorities were fixed. In 1979 while 1000 new lines in Kathmandu were distributed, on explicit distribution policy was framed. But actual distribution did not reflect the priority specified in planning documents.
7. The existence of higher demand and a relatively lower supply of local telephone resulted in the extensive black marketing of telephone lines. Both from the point of view of NTC and social welfare maximization, this trend is harmful.
8. In Nepal, public telephone booth facilities were available in towns. But due to limited number of every 10.464 people and for every 2.60 waiters one public telephone booth was available in Kathmandu valley.
9. During the initial period (until 1974-75) the profit margin of NTC was low indicating suffering. Pricing of services from 1974-75 made profit margin improved significantly. It was as high as 35006 percent before taxes and exceptional expenses.

10. The assets turn over ratio though improving remains quite low. The highest turn over was 0.2279 times in 1977-78, which is still low. Improvement in rate of return, on investment requires efficient utilization of assts and therefore and improvement in assets turn over from the present level of range between 0.4 and 0.5 times.
11. Despite an excellent profit margin 35.06 percent in 1977-78, rate of return on investment before taxes and exceptional expenses was only 7.99 percent due to low assets turnover, low assets turnover is indicative of relative inefficiency in overall management. Too much interference from the government was edited as one reason for this.
12. The residential sector which takes up the lion's share of local telephone facilities is least important from the point of view of revenue generation. This sector makes the last number of calls per month.
13. Because NTC charges it's customers on total numbers of call rather than or total conversation time, the residential sector is making maximum use of facilities (conversation time per call is the highest for this sector) without contributing proportionately to its revenue. Real cost to NTC for servicing this sector is higher than to other sector.
14. The contribution of residential telephones to national developments is also relatively low because most of the calls are for social purposes. Social calls of curse have their own social objectives. But allocation of additional lines to the residential sector in future should be judged against the need of productive use of this investment.
15. In the case of local telephones, there is an inverse relationship between the increase in telephone traffic and deterioration in the grade of service. The grade of service reaches its lowest point when the telephone traffic reaches its highest point i.e. during the day. This shows that the system is nearing its potential capacity during certain hours of the day. Thus the possibility of differential tariff rates for peak and off-peak hours need to be examined.

16. The grade of NTC service to local telephone users national and international trunk telephone users are found to be below normal and this indicates the need for improvements in the future.
17. The use pattern of national trunk telephone service indicates that, from NTC's point of the views the tourism and business sector are financially more attractive then the residential sector.
18. Birgunj, Biratnagar and Pokhara are the most frequently called destinations in national trunk telephone service.
19. The sector is pattern of international trunk telephone service indicates the need for the diversion of local telephone towards productive sector, i.e. non-residential sector.
20. The major share of telex facilities is utilized by the tourism and business sector. But the average monthly telex call made by the tourism sector was found to be about six times higher than that of the business sector. Thus from the point of view of NTC, subscription of additional facilities to this sector is financially beneficial.
21. As shown by the waiting list classification more than 75 percent of the waiters are from the residential sector and hence the demand for telephone is the highest from this sector.
22. In the absence of their own telephone neighbor telephone and office telephone were the alternative way to satisfy telephone needs for both residential and business sector waiters. The third way to meet the telephone demand was the public telephone booth. But due to limited availability of public telephone booths in Kathmandu this option comes third even for the residential sector waiters.

2.6.2 Revenue Collection: Improvement in Service Delivery

"Revenue collection: Improvement is service delivery" by Manohar Krishna Shrestha (1994) had analyzed about the revenue collection of NTC. This study was desired to shows the actual revenue collection position, problems in revenue collection and to give the workable suggestions for improving revenue collection

position. They study covered the period of 10 years from 1983 to 1992. He found the problems of revenue generation in telecommunication corporation arises from congested local service bringing system failures, unsatisfactory clearances of faults in local cable distribution network, shortage of circuits, normal large unmet demand large overdue bill from government department agencies etc. (Shrestha M.K. 1994)

He recommended that NTC should take immediate action such as:

1. Display of customer service chart in the counter.
2. Maintain compliant desk.
3. Provide adequate manpower
4. Encourage payment through Banks
5. Simplify new line connection procedures
6. Maintain a call free counter for billing information etc.

The long term measures should include contracting some of the services related to the telecommunication, such as; maintenance to the private sector and specification of the quality and the standard of the services.

In this way the past researches on Nepal's Telecommunication services were mainly concerned with the economic aspects but not about the potentiality of new services. Thus, this study is carried out to reveal the present situation of available communication services as well as the market potentiality of new mobile telephone service.

2.6.3 "Study on Tariff Structure of Telecommunication in Nepal"

Mr. Rajendra Kumar Pokharel had carried out a research entitled Study on Tariff Structure of Telecommunication in Nepal "in 1997. The major objective of this study was to examine the existing tariff structure of telecommunication in Nepal. With reference to target population, existing efficiency and future development of services. For this purpose, primary data were collected from 600 customers with the help of well-structured questionnaire. The major findings of his study were as follows:

1. NTC is a service motive organization. The present tariff rtes for local telephone, STD, ISD and other services are reasonable since our per capita income and willingness to pay is very low in comparison to other countries.
2. Tariff rate for local telephone is found cheaper subsidizing from STD, ISD and other services.
3. Call duration in the local telephone at present is charged. Time constraint is necessary because it helps to prevent the circuit congestion, but three-minute time is not sufficient.
4. The grade of NTC services to local telephone, national and international trunk telephone users are found to be normal and this indicates the need for improvement in the future.
5. Deposit system plays a vital role in the security of bill, capital formation of NTC for different expenditure, controlling misuse and also decreases the artificial demand. But should be different according to service provided by NTC such as local, STD and ISD. This also should be guided by the amount of telephone bill.
6. The interest rte provided by NTC for the amount deposited by its subscribers is relatively low in comparison to the rate of interest, provided by the banks and financial companies.
7. Average monthly fault rate of telephone is only once in a month, and this should be minimized to once a year or twice a year because of the sensitivity of the service.
8. Average fault is removed in a week. To increase sensitivity and efficiency, fault should be removed within a day.
9. Private PCO’s provided the service on different rates especially more than that of NTC. Therefore, margin should be fixed by NTC.
10. Since NTC is well equipped with latest and advanced technology, most of the billing system is computerized, But Sometime subscriber's bill is loaded with high charge mainly because of the use of cordless set by the subscribers and mixed line conversation and lack of proper handling.

11. NTC takes different tariff for the use of telecommunication facilities during the day, evening and night-time It also helps for the proper distribution of tariff load with respect to time, improves the grade of service and encourages the low-income group to get benefit from the service provided.

2.6.4 “An Evaluative Study of Telecommunication Development in Nepal

Mr. Rudra Nath Baral had carried out a research entitled study on "An evaluative study of Telecommunication Development in Nepal" in 2001. The major objective of this study was to show the development pattern of NTC. Developing countries are always trying to avoid their poverty illiteracy unemployment etc. But due to lack of efficiency of capital and infrastructures the success is only partial. Telecommunication is a basic infrastructure for economic, social and political development of a country, but developing countries are deprived of the facilities of telecom.

The major finding of the study was as follows: (Baral R.N. 2001)

1 Idle capacity of installed telephone lines is in increasing trend, which directly affects in making profit and to meet the target.
2 The demand of telephone lines is highly increasing.
3 NTC is not able to maintain proper coordination between department to department and top level management to lower management.
4 Plan wise targets are not been achieved in every plan period.
5 The now services and facilities, provided by NTC, are satisfying the customers.
6 Sector privatization of NTC, there should be guarantee of employee’s services and facilities.

2.7 Related Researches

Manish (2004) the research has studied the transfer potentiality between AIS and Sonera Information service. However, his research has no particular focus in the mobile and even so on the marketing. His conclusion and recommendations also

do not provide any ideas on the marketing of the mobile telephone. However, the research could be useful studying the marketing when the operators are changed. Bajracharya (2005) has recommended adequate policies and regulations to establish micro-payment system for mobile services.

CHAPTER-3
RESEARCH METHODOLOGY

3.1 Introduction

The introductory Part of this study has already been presented in the first chapter. Beside this the relevant and pertinent literature available to support the study has reviewed in the second chapter now. It is necessary to choose the appropriate research methodology that helps to carry out this study. Thus in this chapter due attention has been paid for research methodology.

3.2 Research Design

Since the purpose of this study is to find the marketing of mobile telephone services, primary information were generated through the questionnaires with mobile telephone users. The study is therefore exploratory as well as descriptive in nature to generate primary data; a survey research design has been applied in the study.

3.3 Population and Sampling

The total number of people using mobile telephone services of NTC represents the population of the study. According the M.I.S. report published by NIC on Jestha 2062, the number of people has reached 240375 and this number of people in Kathmandu valley alone was 201998.

Sample unit of the study comprise the individual users who own the mobile phone. Since the population of the study was too large a sample of 115 mobile telephone uses was selected on the basis of judgmental sampling from the different cross section of the society for the study. Initially, the targeted sample size was 150 which were later reduced to 115 because of research limitations.

3.4 Sources of Information/Data

The present study is based on secondary as well as primary sources of information/data. A secondary source of data includes various periodicals, annual

reports, anniversary souvenir, Telecom Newsletter, and MIS reports that were published by Nepal Telecom. Besides, concerned department section - Heads were interviewed for the clarification of data. Primary sources of information were the people using mobile telephone service provided by Nepal Telecom.

3.5 Data Collection Procedure

For collection of primary data, the above mentioned population was interviewed by telephone through self-administered questionnaire. Also few copies of structured questionnaire were distributed to them by field visit sample of the questionnaire has been presented at appendix (a).

Similarly the secondary data and information were collect through desk research reviewing publications of NTC booklets and reports lying at the central library of NTC other magazines and TU Journals at Kirtipur library.

3.6 Data Processing Technique

After the questionnaire from the respondents of the mobile telephone was the relevant factors are drawn tabulated under the different needs before analyzed the data. So far as compilation is concerned it was performed with the help of scientific calculator and simple microcomputer.

3.7 Method of Analysis

The collected data were thoroughly checked, compiled and presented in appropriate table to facilitate analysis and interpretation. Analysis was done descriptively as well as statically. For the analysis statistical tools such as percentage, weighted average raking etc has been used.

3.7.1 Percentage (%)

It is a mathematical tool, which represent the proportion of any variable in terms of its total. In the present study, percentage has been calculated for the types of deposit account and for valid respondent obtained from the administered questionnaire.

3.7.2 Weighted Average

It is a statistical tool which shows the average figures considering relative importance of all the variables. It is simply the average of weight of each component multiplied by their respective value divided by total weight it is given by

$$\bar{I} = \frac{\sum_{i-1}^{n} w_i x_i}{\sum_{i=1}^{n} w_i},$$

which means:

$$\bar{x} = \frac{w_1 x_1 + w_2 x_2 + \cdots + w_n x_n}{w_1 + w_2 + \cdots + w_n}.$$

Where, X = Weighted arithmetic mean

w =Sum of the weight $w\phi_1$, w_2, w_3 ..... w_n assign to x_1, x_2, x_3 ..... x_n respectively.

wx = Sum of the products of w andϕ x.

3.7.3 Ranking

It is a statistical tool which shows the rank method is usually applicable where quantitative measures for certain are not possible and the individuals in the group can be arranged in order. There by, obtaining for each individual a number indicating his rank in the group is provided.

3.7.4 Diagram and Graph

These are the Picture tools which helps to known the true picture of the different variables in the absence of complicated formula and equation.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

Under this chapter, the data collected from the official periodicals as well as from the respondents are presented analyzed and interpreted according to the objectives of the study.

Analysis has been guided by four objectives. In order to meet these objectives, the collected data have been analyzed and interpreted on objective wise basis.

4.1 General aspects and nature of respondents

4.1.1 Age wise composition of the respondents

Age group identification also gives the meaning of the popularity of the telephone service. Age wise composition reveals the group that mostly uses the mobile phone. In order to get the opinion from all groups, the respondents were from different age groups. The age wise composition of the respondents is presented below in Table: 4.1

Table: 4.1

Age wise composition of the respondents

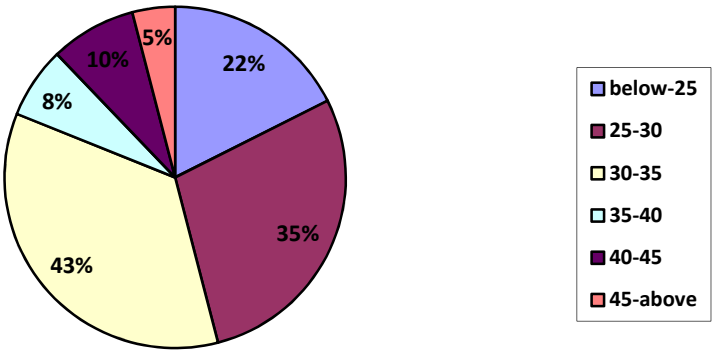
Age	**Respondents**	**%**
Below-25	13	21.67
25-30	21	35.00
30-35	12	43.33
35-40	5	8.33
40-45	6	10.00
45 above	3	5.00
Total	**60**	**123.33**

Source: Field Survey by Researcher.

The age wise composition of the respondents is presented above in Table: 4.1.1. the age between 30-35 found more respondents because their percentage in whole respondents is 43.33% whereas the age between 25-30 is found 35%. Likewise below 25 years of the respondents found 21.67% and the least percentage of mobile users found in 45 and more i.e. 5%

Chart NO.1

Age wise composition of the respondents



The chart is made on the basis of the respondents of age wise composition of the respondents. This figure shows that 43.33% of the respondents are in age of 30-35

4.1.2 Number of respondents of level of education

To make a balance between the respondents and to generalize the views and opinions of different groups of people, respondents were included from different levels of education. The details of the respondents according to the education is presented in the Table: 4.2

Table: 4.2

Number of respondents according to the level of education

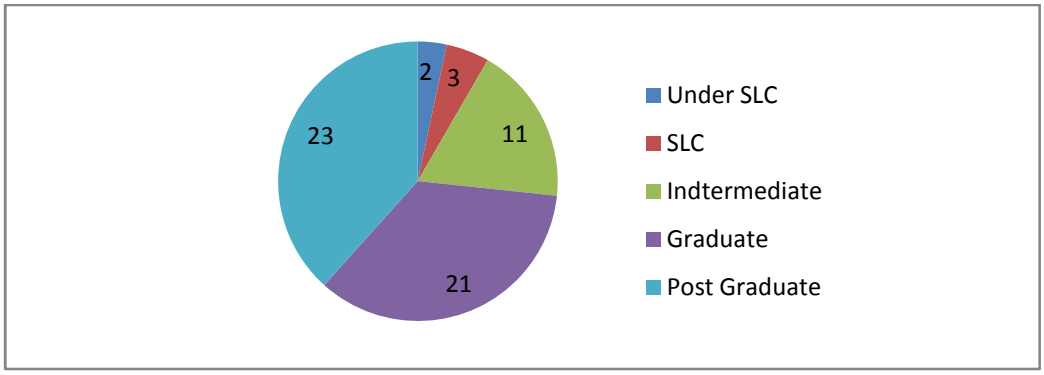
Level	**Respondents**	**%**
Under SLC	2	3.33
SLC	3	5.00
Intermediate	11	18.33
Graduate	21	35.00
Post Graduate	23	38.33
Total	**60**	**100.00**

Source: Field Survey by Researcher.

Table 4.2 shows that the post graduate respondents found to be 38% highest in the level of education whereas graduate use this mobile 35%. Likewis intermediate use this service 18.33%, SLC use this mobile service 5% and under SLC the least 3.33%.

Chart No.4.2

Number of respondents of level of education



This chart is drawn with the help of above table 4.2 which exihibit the ratio of number of respondents of level of education of mobile service.

4.1.3 Occupation wise distribution of the respondents

Since occupation structure of the users of the mobile telephone matters a lot in regard to the use of the mobile, it is significant that respondents are taken from

different age groups. Therefore, respondents also comprised from different occupation groups. . Occupation wise distribution of the respondents is presented in Table: 4.3

Table: 4.3

Occupation wise distribution of the respondents

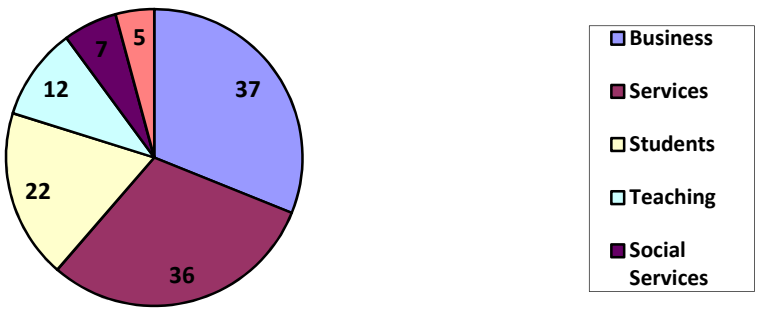
Age	**Respondents**	**%**
Business	37	30.83
Service	36	30.00
Students	22	21.67
Teaching	13	10.83
Social Services	7	5.83
Journalism	5	4.17
Total	**120**	**103.33**

Source: Field Survey by Researcher

In the above table the researcher found that business occupation respondents found more which is 30.83% whereas service holder respondents were found 30.00%. likewise the students use this mobile phone 21.67%, respondents involved in teaching profession are 10.83%, social services 5.83% and in journalism mobile services were used only 4.17%.

Chart No: 4.3

Occupation wise distribution of the respondents



In the above chart shows that the ratio of the user of mobile service according to occupation wise distribution of the respondents

4.1.4 Communication Services known by respondents

There are different types of communication services in existence. When asked about the type of the communication services known by the respondents, respondents replied their acquaintance with common telephone (landline), mobile telephone, email and internet, radio and TV, magazines and newspapers, etc. 108 of 115 i.e. 93.9 percent of the respondents were well known of the facilitates mentioned above. Only 7 percent of the respondents were unknown of the Internet facilities as the communication services.

4.1.5 Communication services mostly used

The respondents were asked to note the communication services used by them. In this context, it is likely that there are multiple responses valid. This was one of the cases where the multiple response analysis has been done. The detail of the communication services mostly used by the respondents are presented in Table: 4.4

Table: 4.4

Communication services mostly used

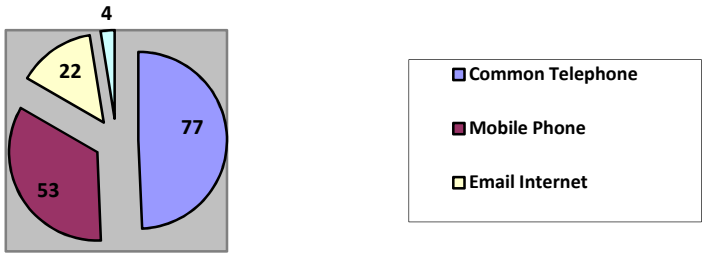
S No.	Used	Respondents	%
1	Common Telephone	51	51.00
2	Mobile Phone	32	32.00
3	Email Internet	13	13.00
4	Other (Telephone, Pay Card, Lettering)	4	4.00
Total		**100**	**100.00%**

Source: Field Survey by Researcher

Table no.4.4 shows that among 4 communication services mostly used. Common telephone is frequently used more comparatively with other used types. Secondly mobile telephone is used more which is 32.00%. likewise respondents used email internet 13.00% and finally in other 4% respondents use this communication type

Chart NO : 4.4

Communication services mostly used



In the above chart we have only feed the ratio of the communication service mostly used by the respondents.

4.1.6 Duration of Mobile Telephone use

The respondents who were interviewed had duration of mobile telephone use from different times. This was one of the cases where the multiple response analysis has been done. The duration of mobile telephone use in presented in Table: 4.5

Table: 4.5

Duration of mobile telephone use of mobile telephone use

S.No	Used	Respondents	%
1	Just this year	10	16.67
2	Last one year	25	41.67
3	Last two year	17	28.33
4	More than two years	8	13.33
Total		**60**	**100.00**

Source: Field Survey by Researcher

In above table shows the 41.67% percent of the respondents respond that they started using the mobile from last one year, whereas since from last two years28.33% of the respondents respond and finally just this year 16.67% respondents respond and 13.33% of the respondents respond for more than two year.

4.1.7 Monthly Bill Amount Paid by the Respondents

The use of the mobile telephone was increasing and respondents replied that they had significant bill amount in their mobile. The details of the bill amount are presented below in Table: 4.6

Table: 4.6

Monthly bill amount paid by the respondents

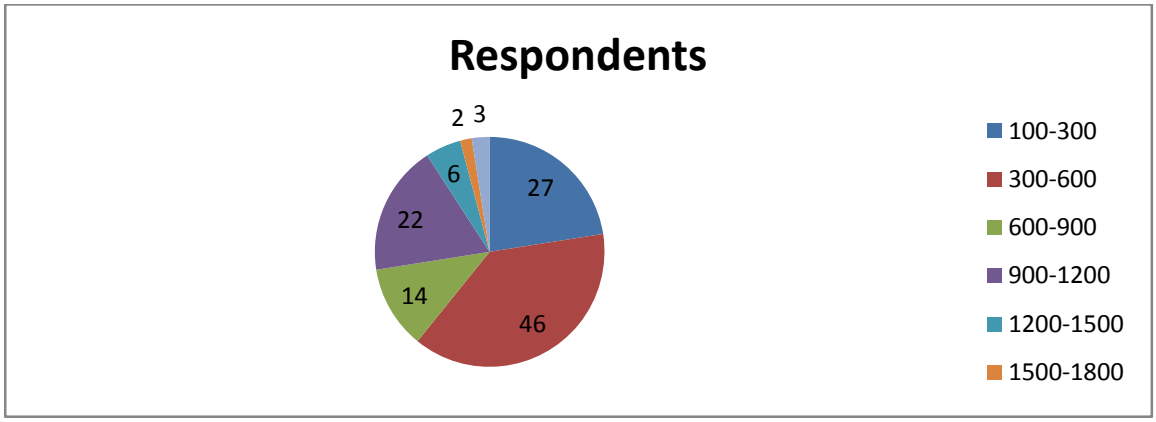
S No.	Marks (Rs)	Respondents	%
1	100-300	13	21.67
2	300-600	23	38.33
3	600-900	7	11.67
4	900-1200	11	18.33
5	1200-1500	3	5.00
6	1500-1800	1	1.67
7	1800 and more	2	3.33
	Total	**60**	**100.00**

Source: Field Survey by Researcher

In the above table, 21.67% of the respondents pay the bill of Rs 100-300, 38.33% of the respondents pay the bill of 300-600, 11.67% of the respondents pay the bill of Rs 600-900, 18.33% of the respondents pay the bill Rs 900-1200, 5% of the respondents pay the bill of Rs.1200-1500, 1.67% of the respondents pay the bill of Rs.1500-1800 and 3.33% of the respondents pay the bill of 1800 and more respectively.

Chart No: 4.6

Monthly bill amount paid by the respondents



The above chart is drawn with the cooperation of the ratio of monthly bill payment of the respondents. The chart has also shown the most of the bill is paid Rs.300-600.

4.2 Marketing Approach of NTC for Marketing and Promotion of Mobile Telephone

The marketing approach of NTC for marketing and promotion of mobile phone was the first objective of this study. To know about this, the researcher has consulted the "Manager of cellular Mobile and New service Directorate Pulchowk". By the visit and with the help of some periodicals published by that department, the researcher has found out the marketing and promotional activities of Nepal Telecom related to the mobile telephone services.

Actually the marketing approach of any organization in connection with exchange of goods and services can be 4ps variable (i.e. product, price, place and promotion). Thus the researcher also tried to study the marketing aspect of mobile telephone service keeping it within these circumstances.

4.2.1 Product Mobile Phone & Its Services

According to William J. Stanton "a product is a complex of tangible and intangible attributes including packaging, color, price, manufacturer's prestige and retailer's prestige and manufacturer's and retailer's services which the buyer may accept as offering satisfaction of wants of need." (Shrestha K.S., 2051) Similarly Philip Kotler explains that "product concept believes that consumers respond to good quality products that are reasonably priced." (Kotler P., Millennium edition)

In this context, mobile Telephone is also an electronic wireless product that satisfies the consumer’s basic need of communication. Mobile Telephone in itself is nothing but only equipment and most important thing is its various communication services that are attached with it. Thus while marketing mobile telephone as a product, the communication service is also associated with it and in this study also, the market of mobile telephone as well as its various services are studied together.

4.2.1.1 Features of Mobile Set

A mobile hand set has the following features:

- Supports essential functionality of GSM.
- Light and handy (weighting about 300 grams)
- Rechargeable battery with talk time of 3-4 hours and stand by time of 60 - 100 hours.
- Alphanumeric keys (both in numeric and alphabetical)
- Character display (short message can be displayed)

- Calling line identification presentation.
- The mobile sets have the following additional features.
- Conference call.
- Data-voice mail service.
- Support up to 9.6 KBPS.
- Short messages sending and receiving

4.2.1.2 Installation of GSM Network

Nepal Doorsanchar Co. Ltd. has been providing cellular mobile phone service to its customer since 1999. The technology used by Nepal Telecom is GSM 900 for providing this service. The switching and control equipment is located in Kathmandu. At present, service is available in Kathmandu, Birgunj, Biratnager, Pokhara, Bhairahawa, Nepalgunj, Dhanagadhi, Rajbiraj, Janakpur, Bharatpur and Hetauda. Here are 75 Bara station in Kathmandu, 8 in Birgunj, 7 in Biratnagar, 7 in Pokhara, 2 in Rajbiraj, 7 in Bhairahawa, 3 in Nepalgunj, 1 in Janakpur. This covers the highway from Kathmandu to Dhulabari. Mobile service code and its coverage area in Kathmandu Valley are given below:

Table: 4.7

Mobile service code and its coverage area in Birgunj Area

S.No.	Mobile code		Cities	Area
	Pre Paid	Post Paid		
1	98550	98457	Birgunj	Birgunj Area, Pokhariya, & Nirmal Basti

Source: Ntc, Birgunj

Actually the basis of cellular communication is a radio cell. A cell is nothing in itself but is an area from where a subscriber can make or receive calls. Each cell covered by a station is called Bare Station. When a large number such cells are

created, a wide continuous coverage area is formed. A mobile subscribes can make or receive all type of GSM service from anywhere within such coverage areas. The communication service provided by GSM is of good quality and fully secured. Since mobile telephone is based on GSM technology, the feature of GSM and its main and supplementary services are described below:

4.2.1.3 Features of GSM

GSM technology is much more advanced, latest as well as most popular technology used in the field of communication. It bears the following important features:

(a) National Roaming

Subscriber can travel to different areas of the country and can make or receive calls with their same mobile set. Calls at any place depend on the availability of coverage frequency.

In Nepal the national roaming was limited to few cities in the beginning. As NTC displayed more cell sites at different places, subscriber can roam to more places with their mobile set.

(b) International Roaming

GSM technology was developed primarily to have a standard system that grants wide area mobility. The subscriber may travel to another country which has a GSM network and can make or receive calls with their own mobile, paying later at home operators of countries.

4.2.1.4 Service from GSM Technology

The service available in GSM technology can be divided in to two classes: main service and supplementary service.

(a) Main Service

The main services available in GSM are as follows:

1) Voice (Regular Technology Telephony and Emergency calls),
2) Fax
3) Data (standard rate up to 9.6 KBPS),
4) VMS (Voice mail System).

Voice mail system (VMS) enables a Voice message to be stored for later retrieval by mobile recipient, either because he was not reachable at the time of the call or because the calling party chooses to access voice mailbox.

5) SMS (Short Message Service).

Short message service (SMS) enables a means of exchanging short text message up to 160 Character between mobile telephone and other networks.

6) Supplementary Service

In addition to the above mentioned main services, the following supplementary services are also available with GSM network:

Table: 4.8

Supplementary Services of Mobile Telephone

S.No.	Types of Supplementary Service	Characteristics
1	Calling line Identification	Displays the number of calling party to the recipient.
2	Call Forward	A subscriber can forward his call to any other number in mobile of fixed return.
3	Call Baring	A subscriber can bar incoming calls or out going calls or long distance calls.
4	Call waiting	A subscriber who is already engaged in a call can be notified of another incoming call.
5	Call hold	A subscriber can place an active call on hold.
6	Multi-party service	A subscriber can create a call with two other parties.
7	Friend and Family	Select any 3 number and pay only 55 Paise per minute.
8	3G Mobile Service	High speed enternet video Calling

Sources: GSM 900 Cellular Mobile Systems in Nepal, Ntc, Birgunj

4.2.2 Price (Cost and Tariff)

In general price is value or amount of money sacrificed to obtain a particular product or services and in economic source price is value-expressed interims of rupee or dollars or any other monetary medium of exchange. (Shreshta S.K., 1992)

Actually, marketing program largely depends on price. No product, no design and no marketing strategy can be formulated without consideration of price.

Price setting has become one of the most complicated and competent jobs there days become it is directly concerned with the objectives of the organization and the existing market situation like, demand and supply competition market rate and other marketing mix.

There are several methods of pricing and it can be categorized into three ways:

- Cost oriented pricing
- Demand oriented Price
- Competition oriented pricing

If the price is fixed on the basis of cost it is said to be cost oriented pricing under cost oriented pricing different companies use different methods such as mark-up pricing, target return pricing, marginal cost pricing. Average cost pricing, break even pricing method etc. But in demand oriented of demand is i.e. Pricing rate totally depends on what the position of demand is i.e. price rate may be fluctuate reversibly according to the fluctuation of product's demand. Similarly in competition oriented pricing price is charged according to the market rate and thus cost of the product will be in same level as the competitor's product.

In the context of mobile telephone service, NTC has adopted cost oriented pricing method.

4.2.2.1 Installation charge for the customer and its Procedure

Person wishing to have a mobile phone must fill-up an application form as prescribed by NTC New Service Directorate. The following documents and description should be attached with the application from:

- Citizenship
- A copy of photo (PP size)
- Reference (Recommendation by the gazette officer of the HMG or from the Nepal Telecom officer of level eight or above.

NTC has fixed the following installation charges that must be paid by the applicants offer acceptance or approval of his application form:

Table: 4.9

Types of Service and their Respective Charges

S.No.	Description	Amount (NRs.)
1	Deposit For:	
	a) Local + STD +	3000
	b) Local +STD + ISD	5000
	c) Located + STD + ISD +	3000
2	Customer subscription charge with tax	615
3	Ownership Tax of NMG	1500

Source: Sale Section, Cellular mobile & New Service Department Birgunj.

The subscriber can pay installation charge as his necessity of the service i.e., the volume of deposit amount depends upon the service he required. After the payment of required installation charges, NIC's New Services Directorate (NSD) provides mobile telephone lines within two hours.

4.2.2.2 Tariff Rate of mobile Telephone services Calls

The tariff rate of mobile call imposed by NTC varies with:

- The types of mobile & calls
- The time of duration taken by the call
- The time on which the call occurs i.e. off peak hours/ peak hours.
- Types of network (mobile to mobile or to other networks) the details of tariff rate are as shown in the following table

Table: 4.10

Tariff Rate of Mobile calls (Air Time Charges)

A. Post-paid mobile	**ATC (Air Time Charge)**	
	Off peak Hours	Peak hours
	10:00 to 06:00	6:00 to 20:00
Local call charges	Rs.1.00	Rs 1.00
Outgoing call/min	Rs,1.00	Rs 1.00
Saturday outgoing call/min	Rs.1:00	Rs 1.00
Incoming call/min from Nepal "Telecom PSTN/NTC mobile	Free	Free
Incoming call/min from other operators	Rs.0:00	Rs.0:00
B. Pre-paid mobile: - Local cell charges		
Outgoing call/min	Rs.1:50	Rs.1:50
Saturday outgoing call/min	Rs.1:50	Rs.1:50
Incoming call/min from Nepal Telecom PSTN/NTC Mobile	Free	
Incoming call/min from other operators	0.00	0.00

Sources: http//www.ntc.net.np/triff/mob-tariff.php

The rates for the domestic calls are as follows:

While summarizing the pricing procedures of mobile telephone services, we find in the lack of demand oriented pricing and competition oriented pricing at the time of launching this new service, neither of competitors nor was any systematic demand analysis done by NTC. But the situation at present is opposite to this, because “Spices Nepal Pvt.”, Ltd. has provided mobile telephone services. So it is become necessary for NTC to review on its price as well as quality of product and

services to keep continuous goodwill on existing customer as well as to attract other potential customers.

4.2.3 Place and Distribution

Place is also an important variable of marketing. The choice of any place largely depends on the nature and characteristics of the product. Thus before lunching any product or service, it is necessary to analyze the features of such places so that right goods and services can be distributed at right place which helps for the better consumption and expansion of its market.

NTC has chosen for major city for the distribution of mobile telephone service. Kathmandu valley has been the area for study because of high density of population, high demand of mobile phone and other features.

4.2.3.1 Distribution of Mobile Telephone in Nepal:

The research work is happened in the Birgunj Sub-Metro Politan City. And there are all together 19 ward in this city.

Table: 4.11

Census Report of Birgunj Area (2070)

District	*Area(Sq.Km)*	*Population*			*No. of VDC*	*No. of Municipality*	*Total Population of Municipalities*		
		Male	*Female*	*Total*			*Male*	*Female*	*Total*
Parsa	*21.17*	*312358*	*288656*	*601007*	*83*	*1*	*75382*	*63686*	*139068*

Source: Statistical Year Book of Nepal, 2068/69, Birgunj

The above figure shows the census report of the Birgunj area. This Birgunj is situated in the Parsa district which is 21.17 sq.km. the total population of this district is 601007 in which 312358 are male and 288656 are female. Likewise this district has got 83 no. of VDC. Parsa district has only one municipality and the population of this city is 139068 in which 75382 are male and 63686 are female.

In Kathmandu valley, NTC introduced mobile from the last week of Chaitra, 2056. The distribution recent trends of fiscal year 2069/70 are as follows: -

Table: 4.12

Mobile Telephone Distribution in Birgunj

S.No	Months	Prepaid	Post Paid	Total	Cumulative No.
1	Shrawan,2070	1246	210	1456	1456
2	Bhadra,2070	1310	204	1514	2970
3	Ashwin,2070	2235	1501	3736	6706
4	Kartik,2070	1401	239	1640	8346
5	Mangshir,2070	1369	209	1578	9986
6	Paush, 2070	1326	225	1551	**11537**

Source: NTC's Birgunj"

The above table shows that the distribution of mobile telephone service in Birgunj service. In the shrawan 2070, the distribution of prepaid mobile is 1246 and the post paid is 210. In the Bhadra, 2070 the distribution of prepaid mobile phone is 1310 and the post paid is 204. Likewise in the Ashwin 2070, the distribution of mobile phone is 1199 and the post paid is 215 and in the kartik, 2070 the distribution of the prepaid mobile phone is 1401 and the post paid is 239 similarly in the Mangsir, 2070 the distribution of the prepaid mobile phone is 1369 and the

post is 209. Lastly in the paush, 2070 the distribution of prepaid mobile phone is 1326 and the post is 225.

4.2.4 Promotion

Promotion includes all aspects of the marketing mix designed to communicate with and influence target markets". (Peter B., 1988) Under promotional strategies, advertising, publicity, personal selling, public relation, sales promotion, etc. are included.

Different marketing organizations use different types of promotional strategy that are mainly based on nature of the product and the time of advertising. In the context of NTC for the promotion of mobile service, it has been providing information about the GSM (Mobile) service by publishing them in large Scale. Mainly such information is concerned with:

- Types of Services
- Features of Mobile Set
- Coverage Areas
- Networking Capacity
- Tariff Rates
- Free Incoming Charge
- Availability of Sim card easily in different places
- Installation Procedure and Charge
- Contact Place and Telephone Numbers etc.

The above mentioned information are published in various booklets telephone directories, NTC MIS reports, souvenirs of NIC as well as of other organizations, Daily Newspapers, Weekly/ fortnight,/ and monthly newspapers and promotion even in bill paying cards. For the marketing and promotion purpose, various newspapers and magazines that are used are presented at the bottom of the study. Also customers/ subscribers or other interested person are requested by NTC to contact the various addresses and telephone numbers. Not only by publishing but

also with the help of FM radio as well as television commercials, NTC is promoting mobile telephone service.

4.2.5 Some Marketing Strategies Followed by New service Department of NTC:

1) At this time, this new service directorate of NTC has the following subscription charges.

Table: 4.13

Post-paid Subscription Charge

S.No.	Description	With STD	With STD and ISD
1	Credit limit	Rs.1000	Rs.3000
2	SIM card	Rs.1000	Rs.1000
3	VAT	Rs.130	Rs.130
4	Ownership charges	Rs. 0.00	Rs 0.00

Source: - htt://www.ntc.net.np/triff/mob_tarrif.php

Thus the customers at early period were paying accumulated price with STD Rs. 5115 and with STD and ISD Rs. 7115. Prepaid subscription charge is presented below:

Table: 4.14

Pre-paid Subscription Charge

S.No.	Description	Charges
1	SIM Card	Rs.176.99
2	VAT	Rs.23.01
3	Advance Recharge	Rs 0.00
4	Ownership Charge	Rs 0.00
5	Registration Charge	Rs 0.00
	Total	Rs. 200

Source: http://www.ntc.nt.np/tariff/mob_tariff.php

Above table show that customer at early period were paying accumulated price of Rs. 1165.

2) Then at the end of Ashadh 2062, NTC has brought-out new policy of distribution mobile telephone with free incoming charge and reduced the tariff rate for local, STD, ISD.

3) Users can receive their calls until the duration of recharge card, even though they have no balance.

4) NSD provided the following supplementary services out of cost (free services):

(a) Voice mail Service

(b) Calling line identification presentation

(c) Call hold

(d) Call forwarding

(e) Short message

5) NSD is providing following services with charge

Table: 4.15

Mobile services & Their Charges

S.No.	Services	Charge	Remarks
1	Voice	Rs.500	Per month
2	Data	Rs.200	Per month
3	Fax	Rs.200	Per month
4	Multiparty	Rs.100	Per month

Supplementary Service

Call Forwarding:

This service facilitates the mobile users to forward the incoming call to any other desired telephone number within the country. Call forwarding can be activated in the following cases.

Unconditional (Always):

This type of call forwarding will divert all the incoming calls to the other telephone number specified. Called party (the user who has set the unconditional call forwarding) will not get any ring or other

On Busy:

This type of call forwarding will transfer the incoming calls to any other telephone number specified if the called party (who has set this type of call forwarding) is busy.

No Reply:

This type of call forwarding will transfer the incoming calls to the other telephone number specified if the called number (who has set this type of call forwarding) does not reply for pre-specified time. This time can be set as 5sec to 30 sec

Not Reachable:

This type of call forwarding will divert all the incoming calls to other telephone number specified if the called number (who has set this type of call forwarding) is out of network coverage.

Call forwarding service is not provided at the time of registration. The subscriber has to apply for this facility. It is to be noted that if the subscriber activates the

call forwarding facility (of any type), he/she will be charged for incoming as well as the outgoing call for the duration of call.

Call Waiting:

With this facility, users can get the notification of another incoming call while they are in conversation with other parties. Users can then decide to entertain or reject the call. This facility also is not provided at the time of registration but has to apply for it.

Call Hold:

This facility provides the option for users to toggle between two parties. With this facility, if the user is in conversation with one party and get the call from other party or want to call another party, he can put the first party to hold and talk with the second party and again toggle back. The subscriber has to apply for this facility also and will be charged for the whole duration of call.

Voice Mail Service (VMS):

Multiparty Conference:

In order to use this facility, the user has to have the CALL HOLD facility. With this facility, the user can make simultaneous conversation with more than one party. This can be realized by putting the first party on hold and initiating or receiving the second call. Then start the conversation with first and second party simultaneously by using multiparty conference facility. The subscriber will be charged for the whole duration of call.

Short Message System (SMS):

The Short Message Service (SMS) is the ability to send and receive text messages to and from mobile telephones. The text can comprise of words or numbers or an alphanumeric combination. SMS was created as part of the GSM Phase 1 standard. Each short message is up to 160 characters in length when Latin alphabets are used, and 70 characters in length when non-Latin alphabets such as Arabic and Chinese are used. When a mobile user sends SMS to other mobile user, the message is at first sent to Short Message Service Centre (SMSC) server which then stores and forwards the message to respective destination.

This service facilitates the mobile users to send 160 character alphanumeric messages to other mobile users. Users have to set the SMSC number, which is +9779851028801 (old number: +9779851028801), in their mobile set for using this service.

Family and Friends Call Service (FNF):

On subscription of Family and Friends Call Service (FNF) feature, Post-Paid Mobile users can make calls to three other Nepal Telecom's telephone numbers (Nepal Telecom's PSTN or Post-Paid or Pre-Paid Mobile) at discount of 25% on normal hour (8:00 to 20:00) Air Time Charge.

Customers can submit up to three Nepal Telecom's telephone numbers at the time of registration for Family and Friends Call service.

This FNF facility will be applicable only with Outgoing calls of Nepal Telecom Post-Paid Mobile Service.

On subscription of Family and Friends Call Service, one-time charge of Rs. 50 (exclusive of TSC and VAT) shall be incorporated in the customer bills of customers subscribing for the service.

Customers can apply the service by sending SMS to 1400 in the following format FNF PSTN1.

6) Value added services to its valued customers; "GSM mobile has introduced international SMS as well as international roaming since April 13, 2004, marketing the transformation of the corporation into company. Initially, these services were introduced for a limited number of countries with immediate plans for extension". (NTC Annual Report 2002/03)

7) NSD is providing 5 percent annual interest in the deposit amount deposited by the subscriber.

8) To collect cash (bill) efficiently and effectively, some programs have been started by NSD, they are as followings:

a) Emergency billing:

NSD can provide bill of mobile calls with in two hours if demanded by the customer, this system make the customer easier while having their residence long time. Also this system has benefited NSD in collecting revenue in proper time.

b) Revenue collection counters:

Realizing the importance of time value of subscribers as well as for collecting revenue in more efficient and effective way, the NSD has made following provisions:

The subscriber of Kathmandu valley can pay their mobile bill either in office counter of NSD, Jawalakhel or in Himalaya Bank LTD. of Lalitpur Branch at Pulchowk and Maharajgunj Branch and other counter & Branch of Kathmandu valley.

c) Data of payment:

The mobile subscriber must pay their bill from 10th to 22nd of the following month (Nepalese Calendar).

9) In future NTC has planned to expand mobile capacity to reach 500000 lines at the end of Tenth Plan.23

10) NSD has been adopting open window system by which any subscriber can get all the required services recently from a place.

11) As the capacity of the present system is exhausting fast and also the potential customers expect NTC to bring more coverage area in the kingdom.

In this way various rules that were implemented in early stage of introducing mobile services are reviewed time to time and new strategic rules and regulations regarding to the pricing distribution, promotion and expansion of GSM services are made accordingly viewing the better customer services as well as the NTC's benefits as part of the promotional activity.

4.3 Level of satisfaction of mobile customers

Mobile telephone services have been forward looking tools and therefore these have been highly demanded by the people in the market. Yet the demand and the supply of the mobile do not seem matched. Basically the level of the satisfaction of the customers after their demand is met depends upon different factors, which are explained below in the next sub chapter. However, while explaining the level of satisfaction; different services of the mobile technology seem to be important for explanation.

4.3.1 Facilities used from Mobile Telephone

Mobile consists of different facilities and services that can be used if the customers prefer them. These services include STD, ISD, Local call, SMS, Fax, other secondary services. The details of the facilities used by the customers from the mobile telephone are presented in Table: 4.17

Table: 4.16

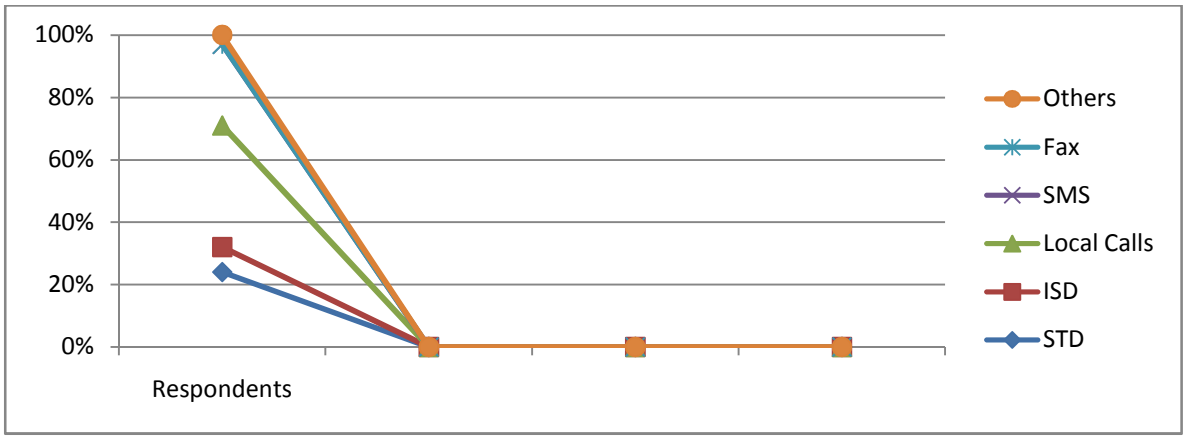
Facilities used from mobile telephone

S.No.	Facilities	Respondents	%
1	STD	24	24.00
2	ISD	8	8.00
3	LOCAL CALLS	39	39.00
4	SMS	26	26.00
5	FAX	0	-
6	OTHER (ALARM, MUSIC, PICTURES	3	3.00
Total		100	100%

Source: Field Survey by Researcher

Chart No.4.7

Facilities used from mobile telephone



The multiple response analysis reveals that 39 percent of the respondents used the mobile for at least local calls. Only 0.00 percent of the respondents reported the use of the mobile for the purpose of the fax in the Birgunj area.

The above table also represents that the satisfaction of the customers depends largely on the availability of the tower to make the local calls. It is assumed further that the inability of the customers to make the local calls results the dissatisfaction.

4.3.2 Customer satisfaction opinions on the rate of the services charge NTC

The respondents presented different opinions regarding the tariff rates of the mobile telephone. The responses varied from bad to best. The details of the satisfaction of the respondents regarding the service charge are presented in Table: 4.3.2

Table: 4.17

Customer satisfaction opinion on the rate of the services charge of NTC

S.no	service	Respondents	%
1	Good	14	23.33
2	So So	36	60.00
3	Best	1	1.67
4	Bad	9	15.00
Total		60	100.00

Source: Field Survey by Researcher

The above table shows all the details about the rate of the services. Majority of the respondents i.e., 60.00 percent of the respondents replied that the rates were so- so type, meaning that neither very good nor that bad. 23.33% of the respondents respond for the good and 15% of the respondent respond for the bad. And 1.67% of the respondents respond for the bad.

4.2.3 Fulfillment of objective of Mobile Telephone

While being asked about the fulfillment of the objective of the use of the mobile telephone, some replied that their objectives were highly fulfilled while there were also some whose objectives were highly unfulfilled. The details of the opinion of the respondents on whether the mobile fulfilled their objectives are presented in the Table: 4.19

Table: 4.18

Fulfillment of objective of mobile telephone

S.No	Level	Respondents	%
1	High Fulfilled	**2**	**3.33**
2	Fulfilled	**31**	**51.67**
3	Neutral	**18**	**30.00**
4	Unfulfilled	**8**	**13.33**
5	Highly Unfulfilled	**1**	**1.67**
Total		**60**	**100.00**

Source: Field Survey by Researcher

In the above table 51.67 percent of the respondents replied that the mobile they were using had fulfilled their objectives. Likewise, 3.33% of the respondents respond for the high fulfilled, 30.00% of the respondents respond for the neutral condition, 13.33% of respondents respond for unfulfilled and lastly 1.67% of the respondents respond for the highly unfulfilled.

4.2.4 Respondents time spent for payment for Post-paid Mobile

The level of the satisfaction of the respondents could also be explained with the help of the time spent by the respondents in queue for the payment of the bills of the Post-paid mobiles. Generally, quicker the service, higher is the satisfaction of

the customers. The details of the time as responded by the respondents for the payment of the post paid mobile telephone is presented in Table: 4.20

Table: 4.19

Respondent's time spent for payment for post-paid mobile

Minutes spent in Queue	Number of Respondents	Percentage	Minutes spent in a queue free line	Number of Respondents	Percentage
5-10	8	34.8	0-5	2	33.3
10-15	5	21.7	5-10	4	66.7
15-20	4	18.0			
20-25	1	4.4			
25-30	5	21.7			

Source: Field Survey by Researcher

While the respondents were asked about the time spent in the queue, majority of the respondents replied that they have to wait between 5-10 minutes. However, even while there was no queue, respondents replied that his activities undertaken during the payment of the bill was very slow and they even had to wait to 5-10 minutes as expressed by 66.7 percent of the respondents.

4.4 Factors of satisfaction

4.4.1 Role of NTC staff

The role of the staff members of the Nepal Telecom seemed to be significant aspect of the level of the satisfaction for the respondents. It was found that the respondents were both satisfied and unsatisfied with the staff numbers of the NTC. The details of the degree of the satisfaction of the respondents is presented in Table: 4.21

Table: 4.20

Satisfaction of respondents with NTC staff

S.No	Level	Respondents	%
1	Strongly Satisfied	2	3.33
2	Satisfied	37	61.67
3	Neutral	15	25.00
4	Dissatisfied	2	3.33
5	Strongly Dissatisfied	4	6.67
Total		**60**	**100.00**

Source: Field Survey by Researcher

In the above table 3.33 percent of the NTC staff are strongly satisfied with the mobile telephone, 61.67 percent of the NTC staff found satisfied with the service provided by mobile phone, similarly 25 percent of the NTC staff found in neutral point from the mobile service, 3.33 percent of the NTC staff found dissatisfied with the mobile service and lastly 6.67 percent found strongly dissatisfied with mobile service.

4.4.2 Physical Facilities

Physical facilities of the organization are also very important from the viewpoint of the satisfaction of the customers with the services provided by the organization. These physical facilities include all the sitting arrangements as well as the queuing arrangements prepared by the organization when the customers visit the organization for a particular purpose of the work. The opinion expressed by the respondents regarding the facilities of the Nepal Telecom is presented in Table: 4.4.2

Table: 4.21

Respondent's opinion on overall physical facilities of NTC

S.No	Facilities	Respondents	%
1	Strongly Satisfied	2	3.33
2	Satisfied	28	46.67
3	Neutral	19	31.67
4	Dissatisfied	9	15.00
5	Strongly Dissatisfied	2	3.33
Total		**60**	**100.00**

Source: Field Survey by Researcher

As regards the physical facilities of NTC, there is again a mixture of responses both positive and negative. Some of the respondents replied that they were strongly satisfied while there were also some who were strongly dissatisfied.

Table 4.22 clearly indicated that 46.67% of the respondents were satisfied with the physical facilities of the Nepal Telecom. However, 31.67 percent of the respondents were neutral with the physical facilities existing in NTC. Almost one-third i.e., 15 percent of the respondents were dissatisfied with the Nepal Telecom Service. 3.33 percent of the respondents are strongly satisfied and dissatisfied with the performance of Nepal Telecom Service.

4.4.3 Use and portability

Use and portability is another major reason for the satisfaction of the respondents with the mobile telephone. A multitude of the functions and uses of the facilities has been a strong underlying cause associated with the satisfaction with the

mobile users. There were different reasons for the use of the mobile telephones. Considering the multiple responses, these reasons and the number of respondents favoring each of the purposes are presented in Table: 4.23

Table: 4.22

Reasons for preference of mobile telephone

Preference	**Respondents**	**%**
Business	21	35.00
Easy to handle	12	20.00
More facilities	3	5.00
Fashion	3	5.00
Communication	19	31.67
Other	2	3.33
Total	**60**	**100.00**

Source: Field Survey by Researcher

In the above table 35% of the business personel use this mobile phone for the business purpose, 20 use the mobile phone for because of it is to handle, 5% of the respondents found the use of the mobile phone for more facilities, 5 use mobile phone for fashion, 31.67% use the mobile phone easy communication and lastly 3.33% of the respondents use the mobile for other different use.

4.4.4 Tariff Rates

Tariff rates were other factors responsible for the satisfaction of the customers. Following Table 4.24 shows the number of respondents who opined STD, local call and ISD on various levels like high, reasonable and low.

Table: 4.23

Opinion of respondents on current tariff rate

Opinion of tariff rate	Local Call		STD Call		ISD Call	
	Respondents	%	Respondents	%	Respondents	%
High	39	65.00	43	71.67	38	63.33
Reasonable	19	31.67	16	26.67	21	35.00
Low	2	3.33	1	1.67	1	1.67
Total	60	100.00	60		60	100.00

Source: Field Survey by Researcher

The respondent's opinion on the current tariff rate provided that almost 65% responses stated that the rates were quite high in case of the local call. Yet, still 3.33% of the total respondents replied that these prevailing rates were low. 31.67% of the respondents do reasonable call. Further, the respondent's opinion was even strong in case of the tariff for STD calls. It was obtained that 71.67% of the respondents were for the opinion that the rates were very high. However the number of respondents who opined that ISD calls was expensive was quite low i.e. 63.33%. table 4.24

4.5 Analysis of Responsible Factors for Customer Satisfaction and Dissatisfaction

In this section, an attempt has been made to analyze the level of respondent's satisfaction with regard to mobile telephone services. In the first part of the section, an attempt has been made to analyze about the satisfaction factor and in the second part of this section analysis about the dissatisfaction factors have been done.

4.5.1 Analysis of Satisfaction Factor

Different components were considered and their weighted average was taken to determine satisfaction level. Weighted average of different considerations for satisfaction is presented below in Table: 4.25 based on the ranking by the respondents. The ranking followed 1 to most important and 7 to least important reason.

Table: 4.24

Weighted average for desired level of satisfaction

Considerations for satisfaction	1st	2nd	3rd	4th	5th	6th	7th	Wt. Avg.
Free incoming charge	89	10	9	7	0	0	0	5.9
Fast correct services	3	17	30	22	18	17	8	16.53
Good network	8	10	1	3	8	27	58	23.3
Targeted for low income	4	10	22	25	22	14	18	18.2
Easy to handle	12	54	21	14	4	7	3	11.5
Minimum tariff rate	0	7	7	22	25	35	19	21.1
Bill payment facilities	0	6	25	24	36	14	14	18.5

Source: Field Survey by Researcher

Above table indicates that free incoming charge has the least weighted average among all. Thus, this could be explained that for the better level of satisfaction, free incoming charge is most desirable. Table no.4.25

4.5.2 Analysis of Dissatisfaction Factor

There were certain specific reasons that were responsible to cause dissatisfaction to the customers of the mobile phone users. The customers needed different factors as discussed above. Failure to achieve a conductive environment to call and receive phones and messages are essential for their enhanced satisfaction.

Weighted average of different considerations for dissatisfaction is presented below in Table: 4.26 based on the rankings of the respondents. Most important reason was marked with 1 and least important with 7.

Table: 4.25

Weighted average for desired level of dissatisfaction

Level	1st	2nd	3rd	4th	5th	Wet. Avg.
High call charge	36	16	34	21	8	19.6
Highly deposit amount	9	12	20	34	40	28.6
Network busy	55	36	13	7	4	14.3
Network coverage area	12	52	27	16	8	20.1
Complicated to get other services	6	3	19	32	55	31.5

Source: Field Survey by Researcher

In case of the weighted average of the desired level of dissatisfaction, network busy was considered worst reason with least weighted average. High tariff rates and network coverage area were other reasons for the dissatisfaction with the mobile telephone services. Table no. 4.26

4.6 Major Findings of the study

As promise made by NTC to introduce the latest technologies of information and communication, it has introduced cellular mobile telephone services to its customers. While it has undertaking its promotional activities, it needs to further

work to increase best goodwill from the existing customers and to attract other potential customers. It should also realize customer's wants, attitude and behavior and it should provide service accordingly.

This research could be explained as an attempt to study the marketing of mobile telephone service by connecting it with consumer's response. Based on the results and discussions made in the preceding chapters, the research has generated different findings. As per the objectives and methodology followed with in the scope of the research work, following findings could be generalized.

4.6.1 Changes in the services of NTC

1. NTC has been providing various Telecommunication services that varies from very old technology to newly developed technologies, Telex, Ordinary Telephone, Leased Line circuits, Program Transmission services, Bureau fax service, V-SAT services, Rural Telecommunication services, National and International Telecommunication services, WLL services, Card Phone services, E-mail and Internet services, GSM Mobile services etc.

4.6.2 Introduction of Mobile Technology

1. NTC introduced (Post-paid), “Mobile Telephone service” in Kathmandu Valley from 2055 Chaitra but the services in other regions (outside the ktm. Valley) was started only after six-month i.e., from Aswin 2056 and (Pre-paid), “Mobile Telephone services” introduced from Bhadra 2060.

4.6.3 Extension of Mobile Services

a. In first phase of (Post-paid) Mobile Telephone services NTC was lunching 10,000 Mobiles line in the four above mentioned cities. 6000 Mobile lines were provided in Kathmandu valley. At present NTC has distributed

Mobile Telephone line in Kathmandu valley 54783 (Post-paid) and 149916 (Pre-paid).

b. While observing the distribution trend of Mobile Telephone, it can be seen that Mobile Telephone users are in Aswin 2070 were 7581 where as the minimum users in Bhadra 2070 are only1456. The cause of such decreasing is due to the minimum distributed Pre-paid Mobile Telephone.
c. In future NTC has planned to expand mobile capacity to reach 500000 lines at the end of the Tenth Plan.

4.6.4 Charges

1. At present total Post-paid subscription charge is Rs. 1000 with STD and Rs. 3000 with ISD.
2. Only the subscribers of Kathmandu Valley can pay their mobile Telephone bill either form NSD's Bill collection counter of from various braches of Himalayan Bank but the customers of other regions (outside Kathmandu Valley) have no option to pay their bill except concerned NTC's Bill Collection Counter.
3. STD and ISD and Pre-paid subscription charge is Rs. 200.

4.6.5 Number of stations

a. Though NTC has built 75 BTS in Kathmandu valley, 8 in Birgunj, 7 in Biratnagar, 7 in Pokhara, 7 in Bhairahwa, 3 in Nepalgunj, 2 in Rajbiraj, 1 in Janakpur to distribute mobiles lines, yet the main switching and controlling mechanism are installed in International Gateway Exchange Building Jawalakhel, Laltipur.
b. This centralized controlling and directing mechanism makes little beat difficulty outside the Kathmandu valley.

4.6.6 Opinions of the respondents

Nature of respondents

1. Majority of the respondents i.e., 60.00 percent of the respondents replied that the rates were so- so type, meaning that neither very good nor that bad. 23.33% of the respondents respond for the good and 15% of the respondent respond for the bad. And 1.67% of the respondents respond for the bad.

2. The age wise composition of the respondents is presented above in Table: 4.1.1. the age between 30-35 found more respondents because their percentage in whole respondents is 43.33% whereas the age between 25-30 is found 35%. Likewise below 25 years of the respondents found 21.67% and the least percentage of mobile users found in 45 and more i.e. 5%

Table 4.2 shows that the post graduate respondents found to be 38% highest in the level of education whereas graduate use this mobile 35%. Likewis intermediate use this service 18.33%, SLC use this mobile service 5% and under SLC the least 3.33%.

21.67% of the respondents pay the bill of Rs 100-300, 38.33% of the respondents pay the bill of 300-600, 11.67% of the respondents pay the bill of Rs 600-900, 18.33% of the respondents pay the bill Rs 900-1200, 5% of the respondents pay the bill of Rs.1200-1500, 1.67% of the respondents pay the bill of Rs.1500-1800 and 3.33% of the respondents pay the bill of 1800 and more respectively.

Use of the communication services

Table no.4.4 shows that among 4 communication services mostly used. Common telephone is frequently used more comparatively with other used types. Secondly mobile telephone is used more which is 32.00%. likewise respondents used email internet 13.00% and finally in other 4% respondents use this communication type

1. In the above table 35% of the business personnel use this mobile phone for the business purpose, 20 use the mobile phone for because of it is to handle, 5% of the respondents found the use of the mobile phone for more facilities, 5 use mobile phone for fashion, 31.67% use the mobile phone easy communication and lastly 3.33% of the respondents use the mobile for other different use.

2. In above table shows the 41.67% percent of the respondents respond that they started using the mobile from last one year, whereas since from last two years28.33% of the respondents respond and finally just this year 16.67% respondents respond and 13.33% of the respondents respond for more than two year.

4. In the above table, 21.67% of the respondents pay the bill of Rs 100-300, 38.33% of the respondents pay the bill of 300-600, 11.67% of the respondents pay the bill of Rs 600-900, 18.33% of the respondents pay the bill Rs 900-1200, 5% of the respondents pay the bill of Rs.1200-1500, 1.67% of the respondents pay the bill of Rs.1500-1800 and 3.33% of the respondents pay the bill of 1800 and more respectively.

5. In the above table the researcher found that business occupation respondents found more which is 30.83% whereas service holder respondents were found 30.00%. likewise the students use this mobile phone 21.67%, respondents involved in teaching profession are 10.83%, social services 5.83% and in journalism mobile services were used only 4.17%.

6. Table no.4.4 shows that among 4 communication services mostly used. Common telephone is frequently used more comparatively with other used types. Secondly mobile telephone is used more which is 32.00%. likewise respondents used email internet 13.00% and finally in other 4% respondents use this communication type

Satisfaction of the respondents

a. In the above table 3.33 percent of the NTC staff are strongly satisfied with the mobile telephone, 61.67 percent of the NTC staff found satisfied with the service provided by mobile phone, similarly 25 percent of the NTC staff found in neutral point from the mobile service, 3.33 percent of the NTC staff found dissatisfied with the mobile service and lastly 6.67 percent found strongly dissatisfied with mobile service.

b. Table 4.22 clearly indicated that 46.67% of the respondents were satisfied with the physical facilities of the Nepal Telecom. However, 31.67 percent of the respondents were neutral with the physical facilities existing in NTC. Almost one-third i.e., 15 percent of the respondents were dissatisfied with the Nepal Telecom Service. 3.33 percent of the respondents are strongly satisfied and dissatisfied with the performance of Nepal Telecom Service.

c. In the above table 35% of the business personnel use this mobile phone for the business purpose, 20 use the mobile phone for because of it is to handle, 5% of the respondents found the use of the mobile phone for more facilities, 5 use mobile phone for fashion, 31.67% use the mobile phone easy communication and lastly 3.33% of the respondents use the mobile for other different use.

d. The respondent's opinion on the current tariff rate provided that almost 65% responses stated that the rates were quite high in case of the local call. Yet, still 3.33% of the total respondents replied that these prevailing rates were low. 31.67% of the respondents do reasonable call. Further, the respondent's opinion was even strong in case of the tariff for STD calls. It was obtained that 71.67% of the respondents were for the opinion that the rates were very high. However the number of respondents who opined that ISD calls was expensive was quite low i.e. 63.33%. table 4.24

e. Above table indicates that free incoming charge has the least weighted average among all. Thus, this could be explained that for the better level of satisfaction, free incoming charge is most desirable. Table no.4.25

f. In case of the weighted average of the desired level of dissatisfaction, network busy was considered worst reason with least weighted average. High tariff rates and network coverage area were other reasons for the dissatisfaction with the mobile telephone services. Table no. 4.26

CHAPTER – 5

SUMMARY, CONCLUSION AND RECOMMENDATION:

5.1 Summary of the study

As its promise to bring home the latest technologies of information and communication, NTC has introduced cellular mobile telephone services to its customers. Being in the wave of the fast changing world of telecommunication, NTC is equipping its customers with more facilities than the ordinary telephone. Its mobility nature is responsible for the popularity increasing day by day. Consequently, the outside parties are also interested to invest in this sector. In now Nepal Telecommunication Authority has given permission to spices Nepal Pvt. Ltd: for the distribution of mobile telephone services. Spice Nepal has already begun the transmission of the mobile facilities.

Therefore to increase best goodwill forms the existing customers and to attract other potential customers, NTC should realize customer's wants, attitude and behavior and it should provide service accordingly. It should not forget that the customers are the king in any business and the success and failure of any business organization entirely depends on consumer's satisfaction and dissatisfaction. Understanding the market response as well as consumer behavior has become much more complex because it requires continuous investigation. Neither any scholars nor NTC conducted such research on mobile telephone service by focusing it with consumer satisfaction reaction. The only thing that has been done so far was that NTC has done only financial analysis before investing in this sector.

Given such a circumstance of mobile telephone, this research could be explained as an attempt to study the marketing of mobile telephone service by connecting it with consumer's response.

The underlying objectives of the study were to find out the marketing approach of NTC for marketing and promotion of mobile telephone, to investigate the level of

satisfaction of customer of mobile telephone users, to identify the reasons factor responsible for customer satisfaction or dissatisfaction of mobile telephone users and to collect their opinion with reference to overall mobile telephone services. Given the framework of objectives as above, this research has been able to achieve the targets.

In the course of achieving these objectives the sample of 150 respondents were planned to be considered but at last only 115 telephone users were taken by judgmental sampling from the Kathmandu Valley. The sample taken included 36 businessmen, 35 services men, 21 students, and 12 teaching professionals, 6 those involved in social services man and 5 journalists and other general public. They participated in filling up structured questionnaires. Some departmental heads were also consulted for the clarification of data.

The collected data were completely analyzed and interpreted considering the objective as outlined in the previous chapter. In order to analyze the information, table, bar-diagrams and other information were presented as per need and at last the major findings are given.

The analysis of the results showed that it had been at least one year for most of the respondents in using the mobile technology of communication. 40 percent of the respondents had been using the mobile since last one year. Yet, it was found that pre-paid was common to post paid. 75 percent of the respondents were using pre-paid mobile. In paying the mobile bill it was further pointed out that the monthly expenditure of Rs. 300-600 was most common. 41 percent of the respondents had the annual income of around 5000-10000 rupees per month.

Local call was identified as the major reason for the use of the mobile. So it was realized that NTC need to reconsider its service for the purpose of gaining support from the customers. 81 percent respondents believed in sufficiency of recharge cards. 80 percent of the respondents replied that deposit amount was reasonable. 59 percent of the respondents replied that the service charge was on the average. The mobile fulfilled objectives of the 53 percent of the respondents. However, the

respondent's dissatisfaction was for the time to be spent in NTC to pay the telephone bill in case of post paid telephone system.

5.2 Conclusions:

Based on the research objectives and the scope of the work, the following conclusions could be drawn:

1. NTC introduced mobile telephone service sonly in four main cities initially: Kathmandu valley, Pokhara, Birgunj and Biratnagar. Later these areas increased. But still there are also big cities, which are also famous in terms of area population industrialization and tourism, but they were ignored in first phase of lunching mobile telephone. But now, mobile is in all major cities all over the country and in near feature, NTC distribution mobile telephone in remote area in the county.
2. Consumers get knowledge about mobile telephone and its various services through different media of advertising. Basically various newspaper magazines, FM radios and Television commercial are used as a media of advertising for the purpose of promotion and scaling up.
3. The number of mobile lines consumed by Business sectors services sectors is high in comparison to the other sectors.
4. As regards to the revenue collection the amount of bill receivable is in increasing trend and there is no proper policy to collect revenue except line disconnection.
5. All mobile subscribers use mobile telephone for voice and they also use SMS services.
6. The main effecting element of mobile telephone is its deposit amount and charging systems. NTC requires deposit amount of Rs5115 in post-paid mobile telephone and in Pre-paid Rs1165. NTC is charging Rs 3.00 in peak hours on Post-paid mobile and Rs. 3.50 in peak hours on pre-paid while mobile both mobile are free on incoming calls.

7. According to the survey from the interview, majorities of mobiles users are dissatisfied with STD call charge of mobile telephone since this charge is going downward because of email and Internet service.
8. Most of the respondent used common telephone because it reduced the mobile telephone charge.
9. Most of respondents used Pre-paid mobile telephone.
10. Majorities of mobile telephone users are satisfied with NTC staff and overall physical evidences facilities.
11. Majorities of mobile telephone preferences more facilities
12. Most of the respondent's opined that the deposit amount was reasonable.
13. Majorities of mobile telephone users were satisfied with the free incoming charge and most of the mobile telephone users were dissatisfied of networking busy character.
14. Objectives of the most of the mobile telephone users were fulfilled.
15. Some precautions that have been highlighted in the of the mobile telephone included:

(a) Some of the newspaper and magazines are attracting the attention of mobile phone users not to use it in continuous manner since it may cause cancer or brain infection.

(b) Mobile phones are strictly restricted to use in hospital especially near Operation Theater and medical equipment due to radiation.

(c) It should not be used inside the aircraft and near aircraft equipment, which may cause the aircraft controlling failure.

(d) The use of mobile telephone will be hazardous near gas station explosive materials and highly inflammable petroleum products.

(e) Talking in mobile telephone while driving vehicles may invite sudden accidents.

5.3 Recommendations:

5.3.1 Tariff rate

The major complains on the tariff rates include that STD and local call are not reasonable and the call charge for out going is quite high. Still, 58.26 percent respondents said that the tariff rates were high while it was only nominal percentage of 2.6 which was satisfied with the existing tariff rates.

1. As regard to the tariff charge of mobile lines, the current charge is getting decreased in international market. Thus, proper adjustment should be made accordingly. It means instead of decreasing local tariff charge, now it will be better to free all the incoming charges even from other providers except NTC. This will make great relief to the mobile subscriber as well as volume of complain will be reduced for NTC.
2. Likewise, it is further recommended to reduce the deposit amount of post-paid mobile telephone and reduction of the tariff rate is also desired.

5.3.2 Expansion of coverage area

While the average weight for the network coverage area was less with the given ranking methodology, it was identified as one of the recommended areas.

1. This service is not targeted for the rural areas of the country. While the rural area still is the potential area for the mobile use, its expansion in these areas is also significant. Mobile needs to be made available to common people.
2. To generate high revenue by providing qualitative service NTC should expand its service immediately targeting remote areas of the kingdom. In this regarded all of the parts of country will be the potential mobile phone areas.
3. The expansion of mobile phone capacity will help to provide service at low cost since marginal increase in operating expenses will be, minimum.

5.3.3 Solving the network busy problems

In the level of satisfaction by the respondents, this was the major reasons for level of dissatisfaction. The weighted average was least for this reason. Therefore, it could be taken as the intervention for enhancing the satisfaction of the customers.

1. Customers have complained the busy character of the network of the mobile telephone tower. Therefore, to solve the networking busy problems it is recommended for increasing the frequency capacity.

5.3.4 Incentives

Incentives are critical to develop a feeling of ownership and compromising attitude of the customers of any products and services. When the services are not regular and competitive, it is essential that the customers are kept satisfied with any sort of incentives. An example could be the two days free mobile service by Nepal Telecom during the third week of November.

1. The large volume of mobile seems still receivable. NTC should make appropriate policy of revenue collection like giving certain percent discount on their bill to those who pay it within fix time period. Always disconnection of line makes customers irritated as it increases the bill of the customer. So NTC should make motivational strategy for their customers.
2. The mobile customers outside the Kathmandu valley should also be encouraged for paying their mobile bills into bank account. Special incentives to them can assist NTC to collect bills in time.

5.3.5 Employee's behavior change

As one of the reasons for satisfaction and dissatisfaction was behavior of the NTC staff, it was recognized as an area for further intervention. Still one tenth of the respondents were not satisfied with the staff behavior. Therefore, NTC could make further strategies to train and orient them towards client-friendly behavior.

1. NTC should provide training for front desk staffs so that they can present effective answers to their customers. This will be a key to fulfill the demand of the customers.
2. NTC staffs also need to be trained and oriented on quick handling of the problems that could be raised by the mobile users regarding the problems in their mobile.
3. As complain of the customers, enquiry service is highly inefficient. So an appropriate enquiry service is recommended. The number for inquire (1498) is always useless as it is always busy.

5.3.6 Precautionary considerations

1. While advertising about the mobile telephone services, NTC should not ignore the other sides of the mobile phone. In other words it should give adequate precautionary information for the users of mobile phone service. It will build trust of the customers over NTC and assist them in utilizing it perfectly and effectively.

5.3.7 Enhancing Services

1. Unclear voice and eventual disconnection have the additional complains. Given this, its significant to enhance the services. There is a need of increasing the number of centers to pay the tariffs. Reliable and effective services are critical to enhance the image of NTC.
2. The customers on the mobile also desire Email/internet facilities. Therefore, such provisions are required. It is further better if NTC could provide facilities of sending the messages from the Internet.

5.3.8 Reducing political intervention

1. NTC despite being an autonomous organization and a corporation, there still exists, political intervention and such an intervention over NTC is condemnable. In the days to come the board for NTC need to be empowered with full authorities and political intervention should be completely avoided.

BIBLIOGRAPHY

1. Ansella Tony, (1993) "**Managing for Quality in the Financial Services Industry**. Chapman and Hall, London,
2. Boyd, H., Westfall, R., Stasch, S., (2000) "**Marketing Research**", Text & Cases 7th edition, A.I.T.B.S Publisher Distributors, Delhi, India.
3. Ben Petrazzini, (2001) "**Case study and IP Telephony in practices**, Published in Telecom Reform volume-1.
4. Baral R.N., (2001) "**An Evaluative Study of Telecommunication Development in Nepal",** An MA thesis submitted to Central Department of Ecomicas, Tribhuwan University, Kathmandu, Nepal.
5. Bennet, P. D., (1988) **"Marketing"** New York, Mc Graw-Hill Book Co.
6. Bajarachary S., (2005) "**Mobile Services Unlimited",** NTC1st Anniversary Souvenir.
7. Desmeules R., (2002) "**The Impact of variety on consumer happiness Marketing and the Tyrannyp Fredom",** Journal of marketing Vol. 12
8. Cellular Mobile and New Services Department, (2005) "**GSM 900 Cellular Mobile System in Nepal",** Pulchowk, Lalitpur.
9. Gauzente C., (2001) "**Why Should Time be Considered in Market Orientation Research**", Journal of Marketing Vol.1
10. Gupta. S.C., (1997) **Fundamentals of Statistic,** New Delhi, Himalayan Publishing House.
11. HMG's Ministry of Information and Communication Department of Information, (2055) "**Nepal Adhirajyako Sanskshipta Parichaya**" Kathmandu.
12. HMG, National Planning Commission (2061), "**10th Five Year Planning**", (2059-64).
13. Hornby, A.S., (1992) "**An Oxford Advanced Learner's Dictionary of Current English**", 12th Indian Impression.
14. Hestand. R., (1991) "**Measuring the level of Services Quality**", Quality Progress.
15. Integral Development System, (1980) "**Economics of Telecommunication in Nepal**", NTC Kathmandu.

16. **"International Forum (Nepal Year Book)",** 2004 variety Printers, Kathamdnu,
17. Kotler, P., (1999) "**Marketing Management**", The Millennium edition, Prentic Hall of India.
18. Koirala, K.D., (2057 B.S) "**Marketing Management**", M.K Publisher and Distributors Kathmandu,
19. Kothari, C.R., (1989) "**Research Methodology Method and Technique"**, New Delhi, Willay Easter Limitation.
20. Mitchell et al.," (2005)," **Toward a Cultural Model of Indigenous Entrepreneurial Attitude",** Journal of Marketing, Vol. 05
21. NTC (1995/96), "**Annual Report",** Central offce Kathmandu Nepal
22. NTC (1996/97), **"Annual Report",** Central offce Kathmandu Nepal.
23. NTC (1998/99), "**Annual Report",** Central office Kathmandu Nepal.
24. NTC (1999/02), "**Annual Report**", Central office Kathmandu Nepal.
25. NTC (2000/01), "**Annual Report**", Central office Kathmandu Nepal.
26. NTC (2001/02), "**Annual Report**", Central office Kathmandu Nepal
27. NTC (2002/03), "**Annual Report**", Central office Kathmandu Nepal
28. NTC (1999), **"24th Anniversary souvenir",** Central office Kathmandu Nepal.
29. NTC (2002), "**27th Anniversary Souvenir**", Central office Kathmandu Nepal.
30. NTC (2003), "**28th Anniversary Souvenir**", Central office Kathmandu Nepal.
31. NTC (2004). "**29th Anniversary Souvenir**", Central office Kathmandu Nepal.
32. NTC (2005), "**1st Anniversary Souvenir**", Central office Kathmandu Nepal.
33. NTC (2004), "**Statement of Mobile Services Operation Study Team**", Central office Kathmandu.
34. NTC (2056), "**Nepal Door Sanchar Sansthan Atit Ra Bartaman**", Time Graphic Printers Pvt., Battisputali, Kathmandu.
35. NTC (2000), "**Handling Mobile Handset**". New Services Directorate Pulchowk Latipur.
36. NTC (2060), "**Telecom Newsletter",** vol. 3, Issue, 2 No.14 Sundhra Kathmandu Nepal.
37. NTC (2061), "**Telecom Newsletter**", vol. 4, Issue, 2 No.20 Sundhra, kathmandu Nepal.

38. NTC (2062), "**Telecom Newsletter"**, vol. 4, Issue, 6 No.24 Sundhra, kathmandu Nepal.
39. NTC (2061), "**MIS Report",** 192 Issue, 16 year Central Office Kathmandu Nepal.
40. NTC (2062), **"MIS Report**", 203 Issue, 17 year Central Office Kathmandu Nepal.
41. Levesque P., 1996) "**Customer Services or Customer Focus"**, world Executive Digest Wharton University.
42. Pokharel R.K., (1997) "**Study on Tariff Structure of Telecommunication in Nepal**", An MBA thesis submitted to Central Department of Management, Tribhuwan University, Kathmandu, Nepal.
43. Ranchhod A., (2001) "**Ethical Marketing for competitive Advantage on the Internet",** Journal of Marketing Vol. 10
44. Sapkota, D.R., (2002) "**Customer Satisfaction in Services Sectors".** An MBA thesis submitted to Central Department of Management, Tribhuwan University, Kathmandu, Nepal.
45. Shresth, M., (2000) "**Evaluation of Transfer Potential of Telecommunication Services**". An MBA thesis submitted to Central Department of Management, Tribhuwan University, Kathmandu, Nepal.
46. Shresth, M.K., (1994) "**Revenue Collection and Improvement in services Delivery**". An MBA thesis submitted to Central Department of Management, Tribhuwan University, Kathmandu, Nepal.
47. Shresth, K.S., (2051) "**Marketing Management concept Strategy**", 3rd Edition, Kathmandu Nepal.
48. Shresth, S. K., (1992) "**Marketing Strategy and Management**", 1st Edition, Padma Educational Traders, Kathmandu Nepal.
49. "**Statistical year Book**" of Nepal, 2003.
50. Timilsion J., (2002) "**Services in Nepalese Economy with Special reference to Tourism Market"**, Banijya Sansar**,** Association of Business Student, CDM. T.U. Kathmandu, 10th Issue.
51. Varma H.V., (1993) "**Marketing Services**", Global Business Press, New Delhi.

Annex 1:

SURVEY QUESTIONNAIRE

Dear Sir,

As an MBS student, I am going to make a research study on Mobile Telephone Service for the ***partial fulfillment of the requirement for the Degree course***. Therefore you are kindly requested to fill up the following questionnaire and it will be the great help for me to prepare the research report. Please tick or write wherever suitable. Thank you very much for your time.

A) Communication

1. Which of their following communication services do you know? (Please as many as applicable)

a) Common Telephone [ ] d) Radio/TV [ ]

b) Mobile Telephone [ ] e) Magazines/Newspaper [ ]

c) E-mail/Internet [ ] f) All of them [ ]

2. Which of the following communication services do you use most?

a) Common Telephone [ ] c) E-mail/Internet [ ]

b) Mobile Telephone [ ] d) Other [ ]

B) Mobile telephone services

3. When did you start using the mobile phone?

a) Just this year [ ] c) Last two year [ ]

b) Last one year [ ] d) More thane three year [ ]

4. Which type of mobile do you use?

a) Pre-paid [ ] b) Post-paid [ ]

5. How easily is the pre-paid recharge card available?

a) Yes [ ] b) No [ ]

6. In case of the post paid, how much time (minutes) do you have wait in payment counter?

a) In queue…….min b) Free ……min

7. In what extent do you satisfy from employee behavior?

a) Strongly satisfied [ ] d) Dissatisfied [ ]

b) Satisfied [ ] e) Strongly dissatisfied [ ]

c) Neutral [ ]

8. What is your opinion about physical facilities provided by NTC? (Waiting room, other facilities like toilet water and parking etc.)

a) Strongly satisfied [ ] d) Dissatisfied [ ]

b) Satisfied [ ] e) Strongly dissatisfied [ ]

c) Neutral [ ]

9. Why do you prefer the mobile telephone? (Please as many as applicable)

a) Busyness [ ] d) More facilities [ ]

b) Easy to handle [ ] e) Other (specify) [ ]

c) Neutral [ ]

10. What sort of facilities you are using from mobile phone? (Please as many as applicable)

a) STD [ ] d) SMS [ ]

b) ISD [ ] e) Fax [ ]

c) Local call [ ] f) Other (specify) [ ]

11. What is you monthly bill of mobile telephone?

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12. How do you evaluate the deposit amount of mobile phone?

a) High [ ]

b) Reasonable [ ]

c) Low [ ]

13. What is your opinion about the current tariff rate (call charge) of mobile telephone?

A) High b) Reasonable c) Low

i) Local [ ] [ ] [ ]

ii) STD [ ] [ ] [ ]

iii) ISD [ ] [ ] [ ]

14. How do you rate services of mobile telephone?

a) Good [ ] c) Bad [ ]

b) So-so [ ] d) Best [ ]

15. Following may be the respondent's opinion as the factors in level of satisfaction of mobile services. Therefore please rate most important to 7 and least important to 1 rank.

a) Free income call charge [ ]

b) Fast and correct service [ ]

c) Good network [ ]

d) Targeted for low income people [ ]

e) Easy to handle [ ]

f) Minimum tariff rate [ ]

g) Bill payment facilities [ ]

16. Following may be the respondent's opinion as the factors in level of dissatisfaction of mobile services. Therefore please rate most important to 1 and least important to 5 ranks.

a) High call charge [ ]

b) Highly deposit amount [ ]

c) Network busy [ ]

d) Networking coverage area [ ]

e) Complicated to get other services [ ]

17. How far of your objectives of using mobile telephone are meet by NTC Mobile telephone services?

a) Highly fulfilled [ ] d) Unfulfilled [ ]

b) Fulfilled [ ] e) Highly unfulfilled [ ]

c) Neutral [ ]

18. Which of the following best identifies your household's total monthly income?

a) Rs. 5000 or less [ ] d) 15001-20000 [ ]

b) Rs. 5001-10000 [ ] e) More than 20000 [ ]

c) Rs. 1000-15000 [ ]

C) Complains and suggestions

19. If you have any complains and suggestions regarding to the mobile telephone services, please mention point wise.

a.……....

b.....

c.....

d.……..