

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Nepal mainly consists of two sorts of business enterprises which are actively contributing for the economic growth. The two types of business enterprises are public enterprises and private enterprises. Public enterprises are government owned business organizations established with the objectives of providing public service and setting up infrastructure of development. On the other hand private enterprises are established with the primary motive of revenue generation at the same time contributing to the nation's economic development. Hence both enterprises play the vital role for the overall development of the nation by mutual effort.

While reviewing the past trend of business performance, one can easily unfold the bitter truth of deteriorating financial condition of most of the public enterprises ultimately leading to liquidation or restructuring. Thus financial sickness has been a matter of recognition for the public enterprises. On the contrary, Nepal Telecom, unlike from other public enterprise has a relatively good track of revenue. Revenue is an indicator of how far an organization is capable of contributing to national economy. It also shows the degree of efficient utilization of the resources to achieve primary objectives. In other words revenue planning analysis is the critical judgment of information in financial statements. With the help of revenue planning different stakeholders make future anticipation of their interest on business. Better revenue planning also shows the capability of organization for achieving the business goals by integrating and coordinating the business activities each other. Conclusively, it can be expressed that revenue planning and achieving it is the yardstick to measure organizational success.

Brief profile of Nepal Telecom Limited

Telecommunication is an inevitable infrastructure of development to all countries. It is considered as prerequisite for the other dimension of development. In Nepal the need of telecommunication services are primarily fulfilled by Nepal Telecom. History of telecommunication service in Nepal is not so long. First telecommunication service in the country is introduced in 1974 BS, which was called Magneto Telephone. Since

then and up to the launching of first five year plan of 2012 B.S., the development of telecommunication was in slow pace. After Nepal started systematic economic development by launching its first five year plan in 2012BS, various national and international trunk lines were added and cross bar telephone lines to people and public offices were distributed. With the formal inception of Nepal Telecommunications Corporation in 2032 BS, a systematic development of telecommunication services has been started. It was established under the Telecommunication Corporation Act 2028 BS. In fact, the advent of Telecommunication Corporation Act is the major step taken by the Nepal Government to provide systematic and scientific telecommunication facility.

Introduction of liberalized economic policy in Nepal gradually facilitated the private sector investment as a result multinational companies also showed their presence. Further more public enterprises started to be privatized. Such trend couldn't also remain intact without influencing Nepal Telecommunications Corporation. Hence Nepal Telecommunications Corporation has been changed to Nepal Doorsanchar Company Limited in 2061 BS under the company act. It's popularly known commercial name is "Nepal Telecom". Although Nepal Telecom has been recently established under the company act its 100% ownership had been held by Nepal Government by receiving the entire investment from government owned entities. However it is on the process of issuing shares to public.

The prime objective incorporated by Nepal Telecom is to provide reliable and affordable telecommunication services all over the country. This objective is in turn coupled with economic development of country. At present Nepal telecom has provided national and international trunk services in all the 75 districts of the nation.

Services Provided by Nepal Telecom:

-) Basic Telephone Service
-) National and International Trunk Call service
-) Rural Telecom Service
-) Pay Phone Service
-) Mobile Telephone
-) Voice Data and Telegraph Leased Circuit Services
-) Email and Internet Service

-) Home Country Direct Dialling Services
-) International Telegraph Services
-) Telex Services
-) V- Sat Services
-) 3G Mobile Service
-) ADSL Internet Service

Role of Nepal Telecom

Established with the objective of providing reliable and affordable telecommunication services all over the country, Nepal Telecom, aims to perform the roles as follows.

-) To fulfil the need of distance communication
-) To add a reliable dimension of infrastructure development
-) To introduce emerging technology of communication
-) To enhance economic development of the nation

Current Shareholding Pattern of Nepal Telecom

Nepal Government (91.50%) = 137,240,335 nos. of shares

Nagarik Lagani Kosh (0.03%) = 50,000 nos. of shares

General Public (3.54%) = 5,311,015 nos. of shares

Staffs (4.93%) = 7,398,650 nos. of shares

Total (100%) = 150,000,000 nos. of shares

1.2 Focus of the Study

This study is designed so as to give more consideration in management aspect of income and expenditure of the Nepal Telecom. Those points are Budgeted & Actual Sales, Budgeted & Actual Collection, Budgeted & Actual Cost, Income and Expenditure relationship, Ratio Analysis, Correlation & Regression Analysis.

1.3 Statement of the Problem

Public enterprises are created for infrastructure development, to generate surplus for self expansion of their service and to contribute for national revenue. So it is complicated to assess the efficiency of public enterprise with their socio-economic

development goals. Public enterprise has to be efficient in the utilization of resources. Hence, organization must assess its financial health.

As most of the industries depend heavily upon the external and internal information, industrialization without telecom development is difficult to imagine. Till present, there is overwhelming demands of Nepal Telecom services, as it does have a little market competition. Despite this fact, the revenue of Nepal Telecom is not satisfactory. On the other hand the organization is in the process of issuing its share to the public. Regarding its net revenue, NTC is successful public enterprises. Net revenue is not only the parameter of measuring the effective financial position. Even when the revenue is in increasing trend, there may have some weakness. Revenue of NTC in relation with investment is very low. Low utilization of resources and problem of receivable management is the serious problem of NTC. The operating expenses of NTC have been increasing each year. Operating expenses has been increased due to increase of volume of transaction but there is some unnecessary item of expenditure.

NTC has not been able to generate the required funds to operate its activities too. In each fiscal year, it has been taking huge amount of loan grant and grant donation from foreign government and donor agencies. It shows the internal inefficiency affairs of NTC. So, this research is trying to highlight the budgeting financial problems of this corporation.

So, matter of financial performance of Nepal Telecom holds keen interest to the stakeholders. In this context, the study primarily focuses on the financial obligation, revenue budget, actual budget, capacity utilization etc. So, the present research tries to solve the following research questions:-

-) Is there positive correlation between budgeted sales & actual sales?
-) Is there same rate of growth of revenue under different headings of services?
-) Is the revenue of Nepal Telecom is in increasing trend?
-) Is there positive correlation between budgeted cost & actual cost?

1.4 Objectives of the Study

The main objective of this study is to examine the comprehensive profit planning mechanism applied by NTC. However, the specific objectives are as follows.

-) To examine budgeted sales & actual sales.
-) To examine and compare the revenue under different headings of services, ie types of services offered by the NTC.
-) To analyze the trend of revenues of Nepal Telecom Ltd.
-) To examine budgeted cost & actual cost.

1.5 Significance of the Study

Nepal Telecom is an enterprise of great national concern. As it is going to be privatized in nearest future in competitive business environment, concerned parties are looking over its performance with great interest. As a private enterprise it has the obligation of socio-economic development as well, so study of revenue planning of leading telecom service provider in the nation will be important for the present and perspective customers, present and perspective investors, policy making authority, further researchers, government & ICT based companies.

1.6 Delimitations of the study

The study has the following limitations:

-) In the study only the financial aspect and revenue planning analysis is made with bird eyes view. Marketing, Human Resource, Research and Development aspects are also the combined input to measure the overall efficiency of the organization but these aspects are not taken as profit planning tools in this thesis.
-) Secondary data are collected from annual reports of the concerned enterprises, so the study suffers from all those limitations that are associated with these reports.
-) The study makes the analysis of revenue planning mechanism of Nepal Telecom; it may not be applicable to any other enterprises.
-) There is time limitation, the study covers only five year i.e. fiscal year 2004/05 to 2008/09.

1.7 Organization of the study

The study is divided in the following five chapters as prescribed by the university.

Chapter I : Introduction

Chapter II	:	Review of Literature
Chapter III	:	Research Methodology
Chapter IV	:	Presentation and Analysis of Data
Chapter V	:	Summary, Conclusion and Recommendations

Chapter one focuses on general background of the study. It deals with major issues to be investigated along with general background of the study, statement of problem, objective of study with organization of the study. This chapter signifies the rational of this study.

Chapter second deals with conceptual consideration and review of related literature which provide a framework with the help of which the study has been accomplished. In this chapter major empirical works has been also discussed.

Chapter three is devoted to methodological approach employed in this study. This chapter includes research design, nature and sources of data, population and samples, method of analysis and definition of key terms.

Chapter four deals with the techniques used in analyzing the collected data and its presentation in the descriptive and analytical manner.

Chapter five consists of summary, conclusion, and recommendation.

CHAPTER II

LITERATURE REVIEW

The review of literature basically highlights the existing literature and research work related to the present research being conducted with the view of finding out what had been already explained by the authors and researchers and how the current research adds further benefits to the field of research. This review of literature had been classified into two subgroups as follows.

-) Conceptual framework
-) Review of related studies

2.1 Conceptual Framework

2.1.1 Concept of Revenue Planning

Revenue planning and control consists comprehensive budgeting, managerial budgeting and budgeting. This term is broadly defined as a systematic and formalized approach for performing significant phases of the management planning and control functions. Revenue planning and control includes the following facts:

-) The development and application of broad and long range objectives for the enterprises.
-) The development of strategic long range revenue plan in broad term.
-) The specification of tactical short range revenue plan detailed by assigned responsibility (division, products and projects).
-) The specification of enterprises goals.
-) The establishment of a system of periodic performance reports detailed by assigned responsibility and follow up procedures.” (Welsch, et. all., 1999)

In many of the better managed companies, comprehensive PPC has been identified as a way of management. It focuses directly on a rational and systematic approach of management objectives and realistic flexibility in performing the management process.

The international management institutions conference on budgetary control held at Geneva in 1980 has defined revenue plan as an exact and rigorous analysis of the past

and the probable and desired future experience with a view to substituting considered intention opportunism in management.

Revenue Plan is estimation and predetermination of revenues and expenses that estimates how much income will be generated and how it should be spent in order to meet investment and revenue requirements. In the case of institutional operations it presents a plan for spending income in a manner that does not result in a loss. Revenue plan represents an overall plan of operations, covers a definite period of time and formulates the planning decision of the management. It can be viewed as one of the major important approaches that have been developed to facilitate effective performance of the management process. Nowadays revenue planning system is especially familiar to business organizations but the practicability of it depends upon the size of the business. The common objective of PPC system is to formulate policy as well as its implementation. In conclusion PPC is directed towards the final objectives of the enterprises and generally includes all of its important elements. It has main objectives of attaining the optimum revenue in the enterprises.

2.1.2 Components of Profit Planning

2.1.2.1 Profit & Revenue

'Profit means a financial gain especially the difference between an initial outlay and the subsequent amount earned' (Concise Oxford English Dictionary, Eleventh Edition). From this meaning of profit it can be said that profit can be earned from the revenue. So in this thesis profit planning & revenue planning are taken as similar words (subjects).

Revenue means '(a) financial gain (b) amount of money gained in business especially the difference between the amounts earned and the amount spent (c) advantage or benefits gained from something.' (Horny, 1992) According to some theories, revenues are the factor payment for taking the risk for agreeing to take what is left over after contractual have been made. In the second type of revenue theory are viewed as a wage for the service of innovation. Revenues in this way are tried to dynamic development. All enterprises activities directly or indirectly revolve to play the significant role for judging the managerial efficiency. In absence of revenue nobody can think about the long term survivability of the enterprises.

Short range and long range revenue planning

“Long range and short revenue plans mean strategic and tactical revenue plans respectively. The two types of revenue plans are developed in PPC. “The strategic revenue plan is broad and it usually encompasses three or more years in the future. The tactical revenue plan is detailed and encompasses on one year time horizon the upcoming year. The development of strategic and tactical revenue plan is a process that involves managerial decisions and ideally a high level of management participation” (Welsch, 2002).

2.1.2.2 Planning

Planning is the basic foundation of PPC. We should be clear in the concept of planning. According to Oxford Dictionary, planning means: (To do something) arrangement for doing or using something, considered or workout in advanced way of arrangement something especially when shown on a drawing scheme.

“Planning is deciding in advance what is to be done in future” (Bhusan, 1994).

“Planning is the feed forwards process to reduce uncertainty about the future. The planning process is based on the conviction that management can plan its activities and condition the state of the enterprises that determine its destiny” (Pandey, 2006).

Plan is then a projected course of action. All planning involves anticipation of the future course of events and therefore bears an element of uncertainty in respect of its success. Management planning and control begins with the establishment of the fundamental objectives of the organization and continues as the process by which necessary resources are provided and employed effectively and efficiently towards the achievement of goals. Planning is essential to accomplish goals. It reduces uncertainty and provides direction to the employees by determining the course of action in advance.

Hence planning is the backbone functions of the management. We can point out the nature of planning as:

-) Planning is goal oriented process
-) Planning is primary function of management
-) Planning is an intellectual work
-) Planning is directed towards efficiency

2.1.2.3 Basic Assumptions and Limitations of Revenue Plan

Revenue planning systems are more common in business organizations and non business organizations. But there are so many assumptions of using revenue planning program. Firstly, the basic plans of the business must be measured in terms of money. Secondly, it is possible to plan for the future of a business in a comprehensive way, coordinating every aspect of the business, with every other aspect to establish optimum revenues. Thirdly, revenue planning is preplanning not merely what to do if things worked out as forecasted, but also what to do if the things work out differently from the forecast. ‘In developing and using a revenue planning program, the following limitations should be kept in mind:

-) The revenue plan is based on estimates.
-) A revenue planning program must be continually adapted to fit changing circumstances.

“The revenue plan should be regarded not as a master but as a servant. It is one of the best tools of an organization. It is not assumed that any revenue plan is perfect. The most important consideration is to make sure, by intelligent use of revenue plans that all possible attainable benefits are derived from the plans as rendered and to re-plan when there are compelling business reasons”. (Welsch 2002).

2.1.3 Implementation of Revenue Plan

“A budget program is viewed and administered in a sophisticated way which does not hamper or restrict management, instead, it provides definite goals around which day to day and mouth to mouth decisions are made. Flexibility in the use and application of both the revenue plan and variable budes also should be considered in detail. Flexibility in budge application is essential and it increases the probabilities of achieving or bettering the objectives”. (Welsch 2002)

The final test of whether the efforts and cost in developing a revenue plan are worthwhile to its usefulness to management. The plan should be developed with the conviction that the enterprises are going to meet or exceed all major objectives. Participation enhances communication. If this principle is to be effective, the various executives and supervisors should have a clear understanding of their responsibilities.

The copies of the complete revenue plan should be prepared and distributed to the member of executive management. The guiding principal in establishing the distribution policy might be to provide one copy to each member of the management team according to their overall responsibilities. After distribution of the revenue plan a series of revenue plan conferences should be held. The top executives should discuss comprehensively about the plans expectations and steps in implementation. At this top level meeting, the importance of action, flexibility and continuous control may be emphasized. In essence, each manager has to realize that the budget is a tool for their use. Conferences should be held so as to convey the revenue plan to each level of management.

2.2 Budgeting as a tool of Revenue Planning

"A budget is a comprehensive and coordinated plan express in financial terms for the operation and resources of an enterprise for some specific period in future." (Welsch, 2002) Budgeting, as a tool to revenue planning is closely related to the broader system of planning in an organization. Planning involves the specification of the basic objectives that the organization will pursue and fundamental policies that will guide it. In operational terms it involves the step of setting objectives, specifying goals, formulating strategies and expressing budgets. A budget is a pre-determined statement of management policy during a given period, which provides a standard for comparison with the result actually achieved.

In summary, the budget involves the statement of plans, the coordination of these plans into well-balanced programs and the constant watching of actual operations to insure that they are kept in line with the predetermined plans. In this way limits are set on expenditures standards of performance are established, and forward thinking is made an essential part of the business management care must be taken, however not to fall into the error of regarding the budget as an end in itself. It is a means to an end. It is not a method of business management but an idea to clear thinking.

2.3 Advantages of Budgets and Budgetary Control

Budget means an estimate of income & expenditure for a set period of time, which gives a clear destination where to go & maximum limit of the expenses to reach the

destination. Point wise a few advantages of budget & budgetary control is given below.

-) The coordination of the main divisions of concern makes for smoother operation and less internal friction, which result in the achievement of the aggregate goal.
-) The efficient operation of the entire unit depends upon all employees working towards a common goal, which is ensured by the budget.
-) The use of budget figures as measurements of operating performance and financial position makes possible the adoption of standard cost principle in division other than the production division.
-) The desired earning on a given investment of capital sets up a revenue point objective.
-) The budgets serve, as stimuli to meet predetermined goals for both incomes and expenses thereby achieving desired revenues or reducing existing losses.
-) The budget of cash expenditures and cash receipts makes it possible for it in advance.
-) The centralization of budgetary control over all divisions and departments helps in carrying out a uniform policy.
-) The forecast of sales enables the management to work out the economic balance between plant and machinery, storage warehouse and inventories.

2.3.1 Objectives of budgets and budgetary control

The process of preparing and using budgets to achieve management objectives is called budgeting. The ultimate objective of a budgetary and control program is the measurement and control of revenue. Thus, the emphasis has been given on building sound budgets for income and costs.

The major purposes of budgeting and control are;

-) To state the firm's expectations (goals) in clear and formal terms to avoid confusion and to facilitate their attainability.
-) To communicate expectations to all concerned with the management of the firm so that they are understood, supported and implemented.
-) To provide a detailed plan of action for reducing uncertainty and for the proper direction to individuals and group.

-) To coordinate the activities and efforts and in such a way that the use of resource will be maximized.
-) To provide means of measuring and controlling the performance of individuals and units.

2.4 Merits of Revenue Planning and Control

-) It forces early consideration of the basic policies.
-) It compels all members of management from the top down to participate in the establishment of goals and plans.
-) It compels departmental managers to make plans on harmony with the plans of other departments and the entire enterprise.
-) It requires adequate and appropriate historical accounting data.
-) It compels management to plan for the cost economical use of the labour material and capital.
-) It reduces cost by increasing the span of control because fewer supervisors are needed.
-) It provides freedom to the executives from many day-to-day internal problems through per determinate policies and clear-cut authority relationship.
-) It tends to remove the cloud of uncertainty that exists in many organizations especially among lower levels of management relative to basic policies and enterprise objectives.
-) It pin points efficiency and inefficiency.
-) It promotes understanding of management for their workers problems.
-) It forces management to give adequate attention to the effect of general business conditions.
-) It checks progress or lack of progress toward the objectives of the enterprise.
-) It forces recognition and corrective action (including rewards).
-) It forces management to consider expected future trends and conditions.

2.5 Review of Related Studies

Ojha (2000) has conducted a research "Revenue planning in manufacturing PEs, A case study of Royal Drugs Ltd. and Herbal Production and Processing Co. Ltd". This

research was mainly focused with the practice of revenue planning and its effectiveness in RDL and HPP Co. Ltd. The main objectives were;

-) To highlight the current practice of revenue planning and its effectiveness in Nepalese PEs.
-) To analyze the various functional budgets adopted in this PEs.
-) To evaluate the variance between targets and actual of PEs.
-) To draw picture of revenue planning process adopted in these two PEs.

Researcher has pointed out various findings and recommendations. Some remarkable findings and recommendations are as follows:

-) Inadequate planning of revenue due to lack of skilled planner
-) Inadequate authority and responsibility to planning department.
-) Failure in achievement due to inadequate evaluation of internal and external variable.
-) Failure to establish adequate forecasting system.
-) Lack of entrepreneurship and commercial concept in overall operation of the enterprise.

Researcher has summarized findings that, plans are formulated on traditional ad hoc basis due to lack of budgeting expert and skilled planners. Some functional budgets are prepared but not in systematic way. They have followed a system of periodical performance reports. He has given various recommendations to improve the revenue planning system of the PEs.

Among them the major recommendations are;

-) It seems necessary to develop, implement and improve the process of revenue planning from the very beginning to the end.
-) Price – Cost - Volume relationship should be taken into consideration while developing sales plan and pricing strategies.
-) System of periodic performance reports should be strictly followed.
-) A Systemic approach to comprehensive revenue planning should be adopted.

Poudel (2002) has conducted a study on "A study of revenue planning, a case study of Gorkhkali Rubber Industry Ltd." This research study mainly focused on the

revenue planning practices and effectiveness of revenue planning of Gorakhkali Rubber Industry Ltd.

The basic objective of that research was to examine how far the difference functional budgets are being applied as tool for revenue planning in business enterprise. The other major objectives of his research were:

-) To sketch the trend of revenue and loss.
-) To see the Gorakh Kali rubber industry's revenue planning on the basis of overall managerial budgeting.
-) To evaluate the variance between targets and actual data.
-) To examine the practice and effectiveness of revenue planning.

Major findings of this research are:

-) Adequate knowledge of relevant internal as well as external market variables
-) Unrealistic of over ambiguous sales forecasts
-) Inadequate planning of revenue due to lack of skilled planners
-) Adequate knowledge of technical know how

He has conducted that GRIL does not prepare the long term strategic revenue plan and is only involved in tactical revenue plan. The objective of the industry is not clear. Finally his recommendation is as follows;

-) Industry should develop the long term strategic plan for every aspect of its operation.
-) Industry should clearly state its objectives and should have in depth analysis of the industry's strength and weakness.
-) Pricing policy should be revised and cost volume revenue relationship should be considered while pricing the products.
-) Effective sales promotion activities should be made to increase the export of the industry.

Parajuli,(2004) has conducted a research about "Revenue planning in manufacturing PEs". In this research he has tried to point out some features and problems of revenue planning in Nepalese manufacturing PEs. He has made his research with special references to "Banshabari Leather and Shoe Factory and Dairy Development

Corporation." Taking these two NG owned manufacturing PEs as sample, he has discussed some features and problems of revenue planning prevailing practices and premises for implementing revenue planning in Nepalese manufacturing public enterprises.

The main objectives of this research work were:

-) Examine how far the revenue planning system of BLSF and DDC has applied
-) Sketch the trend of revenue and problems of planning in these two manufacturing PEs.
-) Pictures the planning diversification of this PEs (in respect of resource mobilization).
-) Examine the revenue planning of BLSF and DDC on the basis of overall managerial budgeting.

He concludes that these two PEs were adopting revenue planning on an unrealistic basis which only promotes irrational optimism and undue conservation. Findings and recommendation of the research were, there is no adequate consideration system and realization of objectives between the different level managers, very few managers are competent to identify the relevant factors, variables and manipulate them for the successful formulation and implementation of the plan, enterprise has not any financial plan; they have only sales and production targets, there is no practice of revenue planning.

The researcher suggests for developing the alternative plan for the earning of revenues. He adds the goals and objectives should be clearly and adequately spelled out, enterprises should define the short-range revenue plans detailed by relevant responsibilities and systematic and formalized approaches for accomplishing the planning objectives. Similarly they should establish the foundation for revenue planning; there should be annual evaluation of the statement of the broad objectives of these enterprises by the executive committee. For this all, it is necessary to formulate the revenue- planning calendar & to develop the basic strategies by the executive management.

Bhatta, (2006) has conducted a research in the topic "revenue planning in public utility concern, a case study of Nepal Electricity Authority. This research was mainly concentrated with the corporate planning systems and budgeting procedure in public utility concern. Main objective of this research was to highlight the various functional budgets and the related variances of the authority. His research pointed out various findings and recommendations. Some remarkable findings and recommendation are as follows:

-) The authority fails to maintain its periodic performance report systematically, goals and objectives are limited only to the high ranking official.
-) Specific goals and objectives are not conveyed to lower level due to lack MBO principle of management.
-) Lack of coordination between departments.
-) Unsatisfactory financial performance.
-) Overheads are not classified systematically.
-) Absence of skilled manpower for budgeting.

He has summarized his findings that goals and objectives of the authority are not clearly communicated to the lower level and there is lack of responsible accounting system. He has recommended various recommendations to improve the formulation and implementation of revenue planning system of NEA.

Among them major recommendations are:

-) NEA must restructure its capital structure and should emphasis the internal financing.
-) Leakage of electricity should be controlled.
-) NEA should develop efficient system of revenue collection.
-) NEA should develop its overhead budget in a well classified and scientific way.
-) It should try to maximize its operating revenue, installed capacity should be utilized fully, participatory style of management should be followed in the formulation stage of plans and polices.

Karki (1991), has conducted a research on the topic "revenue planning in agricultural farm, (a case study of potato and tomato production in Panchkhal valley under Kavre

district of Nepal). The main objectives of the study was to examine the effectiveness of the revenue planning system in the agricultural farming, especially in potato and tomato vegetable crops in Panchakhal valley of Kavre district. The study has tried to explain about the activities and stated the trend of production, revenue, cost of these two vegetable crops. He has pointed out various finding, based on the analysis of data and information.

Major findings;

-) Generally peasants prepare their sales and production plan at the ad hoc basis.
-) The goal and objectives of peasant are not found in written and stated from but they try to fulfill their goals and objectives as soon as possible.
-) The main strategy of the peasants is to achieve their goals and objectives and implement their plans in practice.
-) The plan is made by the boss or based on family and he communicates his plan to his family members. Sometimes advice is also taken from family member as well as other neighbors.
-) Peasant do not formulate the substantive plan strategic long range revenue plan , tactical short range revenue plan, variable exp budget and cost volume revenue analysis.
-) The peasant does not take into account, the inventory policy, proper routine and scheduling of the production plan and material plan.
-) Peasants do not prepare the income statement, balance sheet and revenue plan.
-) There is not proper arrangement of market information system.
-) Generally peasants do not record their cost of production. They do not calculate their own labor, own manure cost, land revenue tax and depreciation and repairing and maintenance cost on their tools and equipments.

Researcher recommends that peasants of Panchakhal valley need to adopt revenue plan, procedures and techniques. The peasants should build up revenue plan for both strategic long range and tactical short range. They should define the short range plan formulated for achieving long term objectives and goals. They need to develop managerial approach.

They should develop the flexible budget and cost volume revenue analysis for non bearing of losses and to help increasing of revenue. They need to evaluate the

statement of broad objectives of the firm. They need to develop systematic periodic performance reports. They need to collect marketing information.

Conclusion about the revenue planning:

-) There is no coordination and realization of objectives within family and between different farmers. The broad and long-range objectives , long range plan has not been defined in the farmer's level
-) Very few of the farmers are competent to identify the relevant variables and manipulate them for the successful formulation and implementation of the plan. These few of the farmers cannot analyze internal and external environment. So there is not possibility of adequate information of strength and weakness, opportunity and threats.
-) Farmers have no planning for direct labor, material variables cost and other exp. They should prepare the alternative plan for the increment of revenue.

Malla, (2009) has conducted a research in the topic "Profit Planning in Commercial Bank: A Case Study of Machhapuchchhre Bank Limited". The specific objectives of the studies were as follows.

-) To examine the present profit planning premises adopted by MBL.
-) To analyze the variance of budgeted revenue & actual achievement.
-) To sketch out the trend of profit & loss.
-) To analyze the various functional budgets & financial plans formulate & implemented in MBL.
-) To find out the contribution of profit in growth of the Bank.

Major Findings;

-) The revenue & expenses, net profit, deposit & loan & advances of MBL are in increasing trend.
-) MBL is able to achieve the budgeted deposit & loan & advance every year.
-) MBL is able to manage cash efficiently but isn't able to utilize all capacity.
-) There is lack of systematic profit planning & controlling system.
-) The ratios of MBL are found satisfactory.

) MBL has experienced manpower & has centralized authority.

He has recommended various recommendations to improve the profit planning system of the bank. Among them major recommendations are:

) Bank should develop its specific goal for the coming year.

) Bank should have broad analysis of the bank's strength & weakness. It should try to overcome its weakness by using the strength.

) MBL should gather all inputs to make best utilization of capacity.

) Every manager should understand the role of the budget

) Credit investment budget should be prepared on the realistic ground.

) Deposit collection plan should be developed by interim time period which will be helpful for managing fund.

2.6 Research Gap

All the researches reviewed above have focused on some common major points. All of the previous researcher have pointed out, no proper planning system and have recommended for effective implementation of profit planning system and have recommended for the effective implementation of profit planning system, which is related on the major findings of their study but none of them have clear about the consequences of networking in the said manner.

This study so would be of different value as it focuses only on specific area of overall revenue planning but not just profit planning i.e., sales budgeting with special reference to Nepal Telecom Ltd. It would be significant step on knowing about the sales budget of Nepal Telecom Ltd which will create synergic impact on its profitability of the company.

CHAPTER III

RESEARCH METHODOLOGY

“Research is a systematic and organized effort to investigate a specific problem that needs a solution. This process of investigation involves a series of well-thought-out activities of gathering, recording, analyzing and interpreting the data with the purpose of finding answers to the problem. Thus, the entire process by which we attempt to solve problems or search the answers to questions is called research” (Wolf and Panta, 2004).

The major objectives of this research are to analyze the revenue planning practice in Nepal Telecom, its effectiveness, use of short term and long term revenue planning tools, to evaluate the variance in budgeted and actual result and find out financial strength and weakness. This research work has followed the following research methodology:

3.1 Research Design

"Research design is the plan structure and strategy of investigation conceived so as to obtain answer to research questions and to control variance. The plan is the overall scheme of program me of the research. It includes an outline of what the investigator will do from writing the hypothesis and their operational implication to the financial analysis of data"(Kothari. C.R 1990).

For this research work most of the secondary source data has been used. Some of the financial tools along with statistical tools have been applied to examine facts and descriptive technique has been adopted as a research design. Actually the study is based on case study research design.

Research variables are the important portion of research design. For this research study sales, different budgets, expenses, revenue & loss, other items of balance sheet are the main research variables. These are the variables of a complete budgeting. The study is closely related with the various functional budgets and other accounting statements as well as the actual result of the budgets.

3.2 Population and Sample

All the public enterprises partly or fully owned by government are the total population of the study. The current study is only related with the revenue planning of Nepal Telecom as Sample Company. The present study is undertaken for a period of past 5 years from fiscal year 2004/05 to 2008/09. For the purpose of the analysis of tactical revenue plan analysis, 2004/05 is as base year.

3.3 Sources of Data

For effective research work, data play very important role, to the last extent all the research data for this research work are taken from its origin. For this research work all the quantitative data are collected directly from NT. Besides this data are collected from the persons directly or indirectly related with NT. Secondary data have collected from the published annual reports of NT. Similarly, other necessary data have been collected from the publication of Ministry of Finance, Central Bureau of Statistics, National Planning Commission and related publications.

3.4 Data Collection Technique

There are different data collection procedures for the research work. Since the study is related with budgeting practice, most of data are collected from secondary source. As secondary source of data, published functional budget and financial statements are taken. They are collected from account department, planning department and functional department of NTC. Some supplementary data and information, literature review are collected from the Western Regional Library, Pokhara, Central Library, T.U., Library of Shankar Dev Campus, Kathmandu, different journals magazines and other published and unpublished reports documented by the concerned authorities.

3.5 Data Analysis Tools

For the research work all the data are the input for research process. And systematic processing requires an appropriate analytical tool. Since data are main raw material for analytical study, for processing these data using different analytical tool, one should first manage and arrange, accumulate and present all the data in appropriate table and formats in systematic manner.

For this research study these analytical tools are used:

Statistical Tools

Karl Pearson's co-efficient of correlation(r)

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Regression Equation

$$= a + b(X)$$

Financial Tools

Current Ratio (CR) = Current Assets / Current Liabilities

Quick ratio (QR) = Quick assets/Current liabilities

Inventory Turnover Ratio = Sales/Inventory

Average age of inventory = 360 / inventory turnover ratio

Debtors Turnover Ratio= Sales / Debtors

Average Collection Period (ACP) = Debtors*360 /Sales

Total Assets Turnover Ratio (TATR) = Sales / Total assets

Fixed Assets Turnover Ratio (FATR) = Sales / Net Fixed Assets

Working Capital Turnover Ratio (WCTR) = Sales / Net Working Capital

Capital Employed Turnover Ratio (CETR) = Sales/Total Capital Employed

Total Debt Ratio = Total debt / Total assets

Debt Equity Ratio (DE) = Total Debt / Net Worth

Long Term Debt to capital employed ratio = Long Term Debt / Capital Employed

Interest Coverage Ratio = EBIT / Interest

Net Profit Margin = Net Profit after Tax / Sales

Return on Equity (ROE) = Net Profit after Tax (NPAT) / Net Worth

3.6 Research Variables

Sales, collection of dues, cost, capacity utilization, revenue and loss, total assets, revenue margin, total capital employed, capital expenditure of NTC are the research variables of the study.

3.7 Limitation of Methodology

1. Only a few tools are used in this study to examine the profit & revenue planning of Nepal Telecom Ltd. which may not be enough.
2. The study results are based on the result of the statistical & financial tools & techniques.
3. The result of the study is used only for fulfilling the objective of this study. So results of this study may not apply for other purpose.
4. The study covers only five year period i.e. F/Y 2004/05 to 2008/09.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

This chapter highlights the profit planning of Nepal Telecom. The tools used for the purpose of analysis have been discussed in detail in research methodology. Some financial and statistical tools have been used to evaluate the profitability position of Nepal Telecom. The financial tool include ratio analysis between various variables whereas the statistical tools include regression analysis and hypothesis test between sum of the variables. Moreover the variables affecting to the profitability position are also considered in the study.

4.2 Presentation and Analysis of Data

The main objective of this study is to examine the revenue planning of NTC. To meet this objective, it is essential to present, analyze and interpret data contained in annual reports of NTC. The annual reports include balance sheet and income statement along with their supporting schedules. Analysis and interpretation of data is an attempt to find out the implications and the significance of past activities/decisions in the light of present position and future prospect and to make suggestion for future action. Analysis and interpretation are closely connected terms because without an analysis, interpretation is not possible and lack of interpretation makes analysis useless. These two supplement each other. Analysis involves the compilation of data, ranking data as per its relative significance and examination of data using different tools. On the other hand, interpretation means making explanation and drawing inferences about the changes or variations in the phenomena about the outcome of analysis. In this study, the data are presented, analyzed and interpreted on the basis of research questions.

The table summarises the key economic figures of NTC for the study period. The analysis would help to analyze the strengths and weaknesses of the corporation and causes of the problems/weaknesses so that some recommendations could be made. The different types of tools and techniques that have been used to analyze the data are as follows:

) Budgeted Sales and Actual Sales

-) Budgeted Cost and Actual Cost
-) Trend Analysis
-) Correlation/Regression Analysis

4.2.1 Relationship between Budgeted Sales and Actual Sales

The sales volume of NTC is found to be increasing each year. The Budgeted sales and actual sales of Nepal Telecom for the five years study period is presented in the following table:

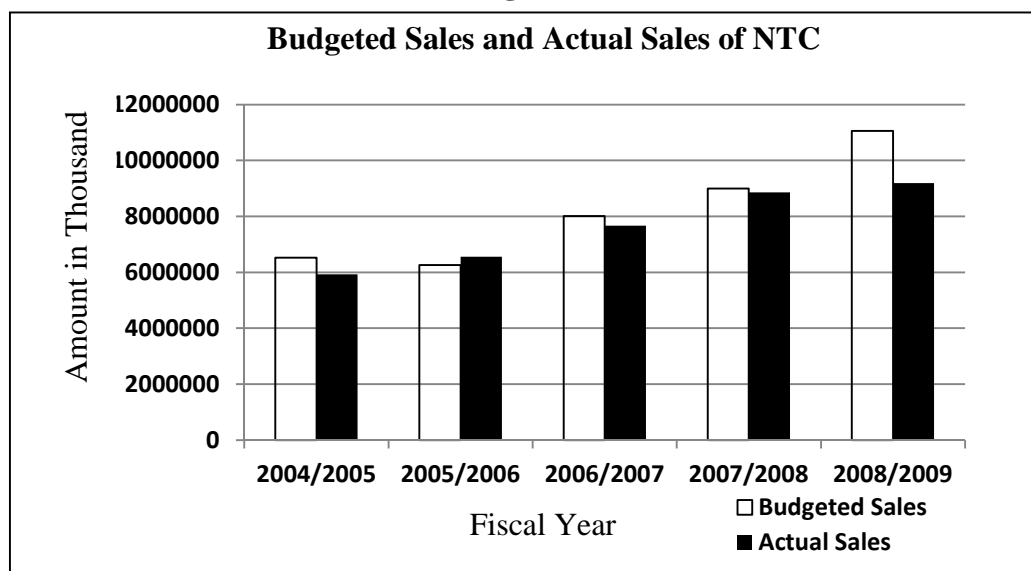
Table 4.1
Budgeted and Actual Sales

Amount in thousands

Fiscal Year	Budgeted Sales	Actual Sales	Variance
2004/05	65,25,485	59,28,648	-9.14
2005/06	62,54,556	65,55,992	4.81
2006/07	80,05,000	76,69,283	-4.19
2007/08	90,00,000	88,55,034	-1.61
2008/09	1,10,52,000	91,94,297	-16.80

Source: Nepal Telecom

Figure 4.1



In the table 4.1 and figure 4.1, the difference between budgeted and actual sales of Nepal Telecom is presented throughout the study period. There is a difference

between the budgeted and actual sales of Nepal Telecom. The actual sales of Nepal Telecom is higher than the budgeted sales only in FY 2005/2006. In all other FY the budgeted sales is always higher than the actual sales. This clearly notifies that Nepal Telecom is not being able to achieve the sales target. This is because of the severe competition from the private sector telecom.

4.2.2 Relationship between Budgeted Collection & Actual Collection

The following table presents the relationship between budgeted collection and actual collection of Nepal Telecom. The collection of Nepal Telecom generally consists of the due collection from the customers of general landline telephone service.

Table No. 4.2
Relationship between Budgeted Collection & Actual Collection

Amount in Million

Year	Actual Collection	Budgeted Collection	Difference
2004/2005	2,317.45	3,542.52	52.86
2005/2006	2,389.76	2,856.23	19.51
2006/2007	4,214.31	5,612.23	33.17
2007/2008	7,769.16	6,958.25	-10.43
2008/2009	11,270.3	12,560.23	11.44

Source: Nepal Telecom

The table 4.2 shows the relationship between annual collections of Nepal Telecom for the study period. The actual collection of Nepal Telecom is in increasing trend throughout the study period. The difference between the actual collection and the budgeted collection is in decreasing trend. The difference between budgeted and actual collection is positive throughout the study period except in FY 2007/2008.

4.2.3 Product wise Revenue Collection of NTC

As Nepal Telecom is a service sector industry, it mainly collects revenue from sales of different products. Nepal Telecom was the only organization in telecommunication sector since few years ago. There was a monopoly of Nepal Telecom in telecommunication sector but now the situation has been changed due to private

sector telecommunication providers. The annual sales revenue collection of Nepal Telecom for the last five years from sales of different products is shown in the following table.

Table No. 4.3
Revenue Collection Details (in millions)

Products	2004/05	2005/06	2006/07	2007/08	2008/09
General Telephone					
Local Calls	2,458.56	2,652.43	2,850.21	3,430.15	3,390.37
STD	1,112.23	1,056.25	1,125.25	1,326.00	959.93
ISD	798.12	888.63	856.25	985.68	652.15
Leased Circuit	40.32	42.15	45.12	40.46	98.91
Telex	1.2	1.5	1.8	1.96	0.18
IN Service	38.59	42.31	45.21	54.47	77.46
Internet	8.70	9.57	16.21	22.74	22.47
ADSL	-	-	-	17.54	160.58
Other	122.54	142.74	156.42	220.18	154.11
Total Revenue	4,580.86	4,835.58	5,096.47	6,099.21	5,516.21
Mobile Service					
Local Calls	755.41	889.56	929.65	998.62	830.56
STD	39.54	42.65	45.56	53.23	40.91
ISD	88.5	98.25	108.25	117.29	111.61
Roaming	169.25	145.21	165.24	172.71	151.63
Prepaid Card	255.65	288.45	300.18	322.90	1194.31
Recharge Card	1,956.32	2,246.52	2,856.54	3,712.55	6,035.99
Other	400.52	399.54	456.23	513.54	573.71
Total Revenue	3,665.19	4,110.18	4,861.65	5,890.88	8,938.74
CDMA					
Local Calls	-	-	136.54	195.09	176.37
STD	-	-	112.56	124.69	71.29
ISD	-	-	88.54	92.29	50.21
Data Service	-	-	11.23	14.85	15.50
Prepaid Card	-	-	142.56	198.10	133.09

Recharge Card	-	-	1,245.79	1,528.50	2,049.03
Other	-	-	188.25	191.45	147.33
Total Revenue	-	-	1,925.47	2,344.99	2,642.85
Total Revenue After Adjustment	8,246.1	8,945.76	11,883.60	16,624.21	20,464.62

Source: Annual Reports of Nepal Telecom

Figure 4.2

Total Revenue after Adjustment

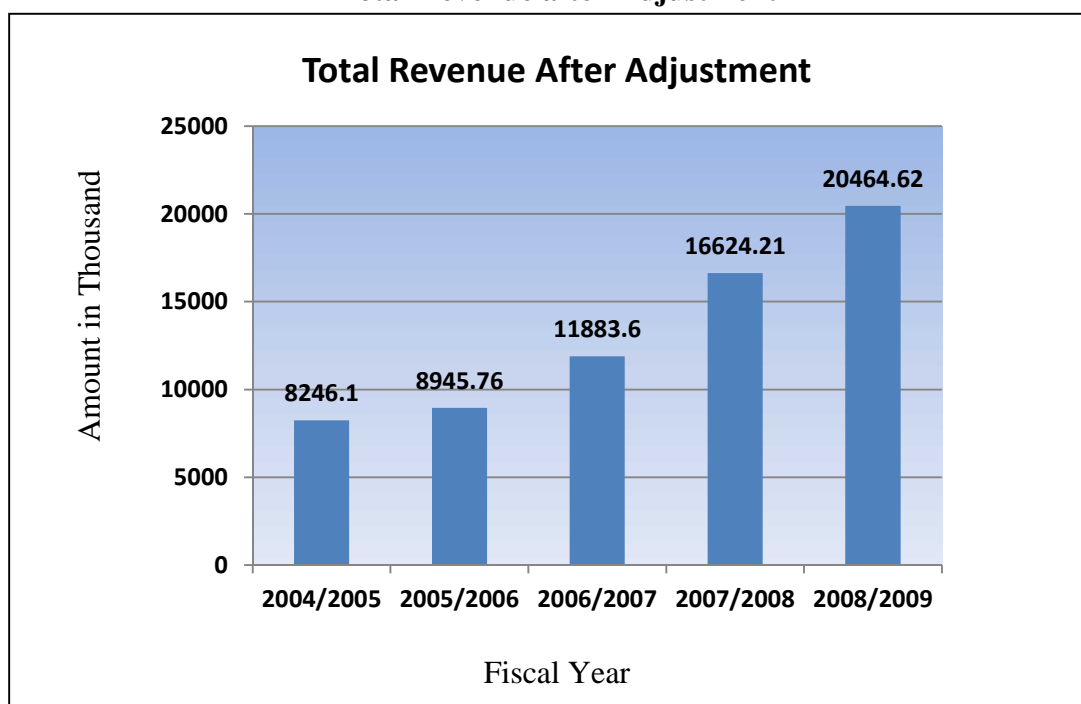


Table 4.3 & Figure 4.2 show total revenue after adjustment of Nepal Telecom for the study period. Total revenue after adjustment is in increasing trend for the whole study period so it can be said that total revenue after adjustment of Nepal Telecom will increase in future period too.

4.2.3.1 Product Wise Revenue

Mainly the services provided by Nepal Telecom can be divided into three headings i.e. General Telephone, Mobile Service & CDMA. The annual revenue under different headings of services of Nepal Telecom is presented in the following table:

Table No. 4.4

Product wise Revenue Collection

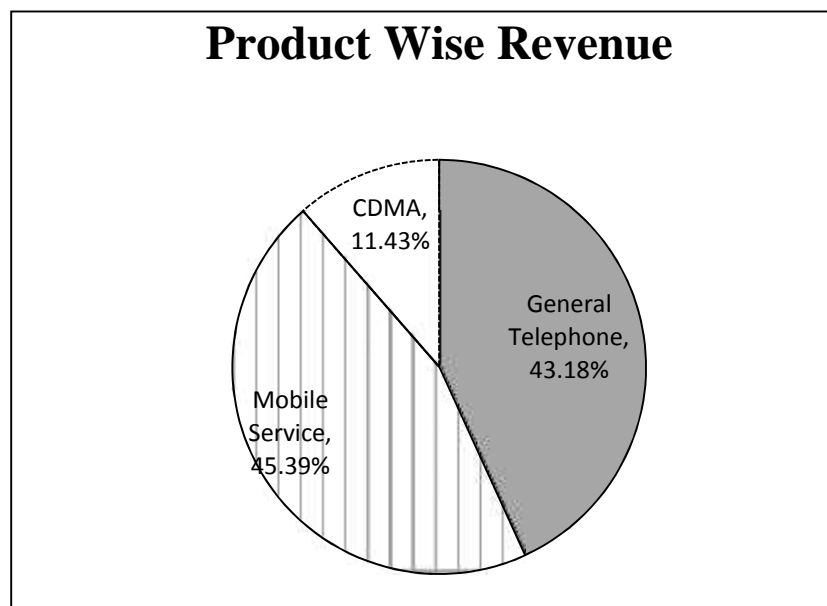
(in millions)

Products	2004/05	2005/06	2006/07	2007/08	2008/09	Total	%
General Telephone	4,580.86	4,835.58	5,096.47	6,099.21	5,516.21	26,128.33	43.18
Mobile Service	3,665.19	4,110.18	4,861.65	5,890.88	8,938.74	27,466.64	45.39
CDMA Service	-	-	1,925.47	2,344.99	2,642.85	6,913.31	11.43
Total	8,246.05	8,945.76	11,883.59	14,335.08	17,097.80	60,508.28	100%

Source: Nepal Telecom

Figure 4.3

Product Wise Revenue Collection



The table 4.4 & Figure 4.3 show the revenue generated on different three headings of services. The revenue from Mobile Service is highest (45%), General Telephone gets second position (43%) & the revenue from CDMA service is in the lowest position (11%). It shows a little increment of revenue in Mobile Service or in General Telephone plays significant role for the increment of net profit. The revenue from

CDMA service plays a very less important role on aggregate profitability of the organization.

4.2.4 Trend of Revenue under Different Headings

The trend of revenue under different heading of services for the study period is as follows.

Table No. 4.5
Trend of Revenue (in millions)

Products	2004/05	2005/06	2006/07	2007/08	2008/09
General Telephone	4,580.86	4,835.58	5,096.47	6,099.21	5,516.21
Mobile Service	3,665.19	4,110.18	4,861.65	5,890.88	8,938.74
CDMA Service	-	-	1,925.47	2,344.99	2,642.85
Total	8,246.05	8,945.76	11,883.59	14,335.08	17,097.80

Source: Nepal Telecom

Figure No. 4.4
Trend of Revenue

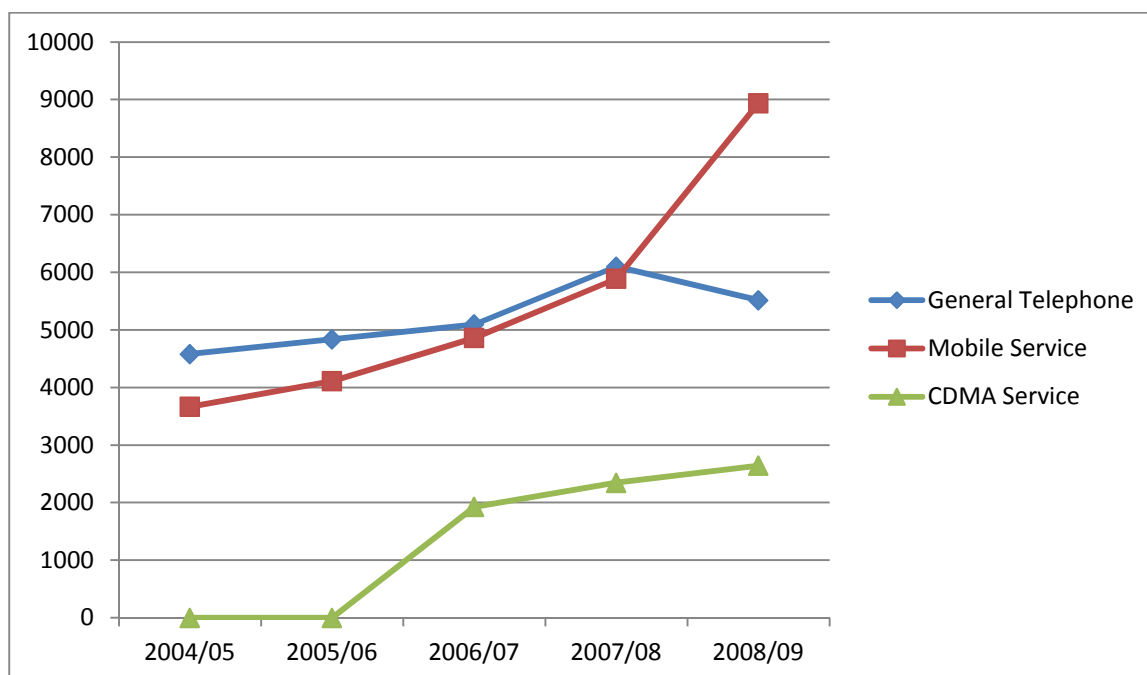


Table no 4.5 & figure no 4.4 show the continuous growth in revenue of Mobile & CDMA service. But the revenue from General Telephone is increasing for first four years & decreased in fifth year. It may be because of the attraction of the people toward mobile telephone. In such a condition Nepal Telecom should prepare a policy for the increment of revenue of General Telephone.

4.2.5 Sales Revenue of Nepal Telecom

Annual total sales of Nepal Telecom for the study period is given below.

Table No. 4.6
Sales Revenue of Nepal Telecom (in thousands)

Year	2004/05	2005/06	2006/07	2007/08	2008/09
Amount	59,28,648	65,55,992	76,69,283	88,55,034	91,94,297

Figure No. 4.5
Sales Revenue of Nepal Telecom

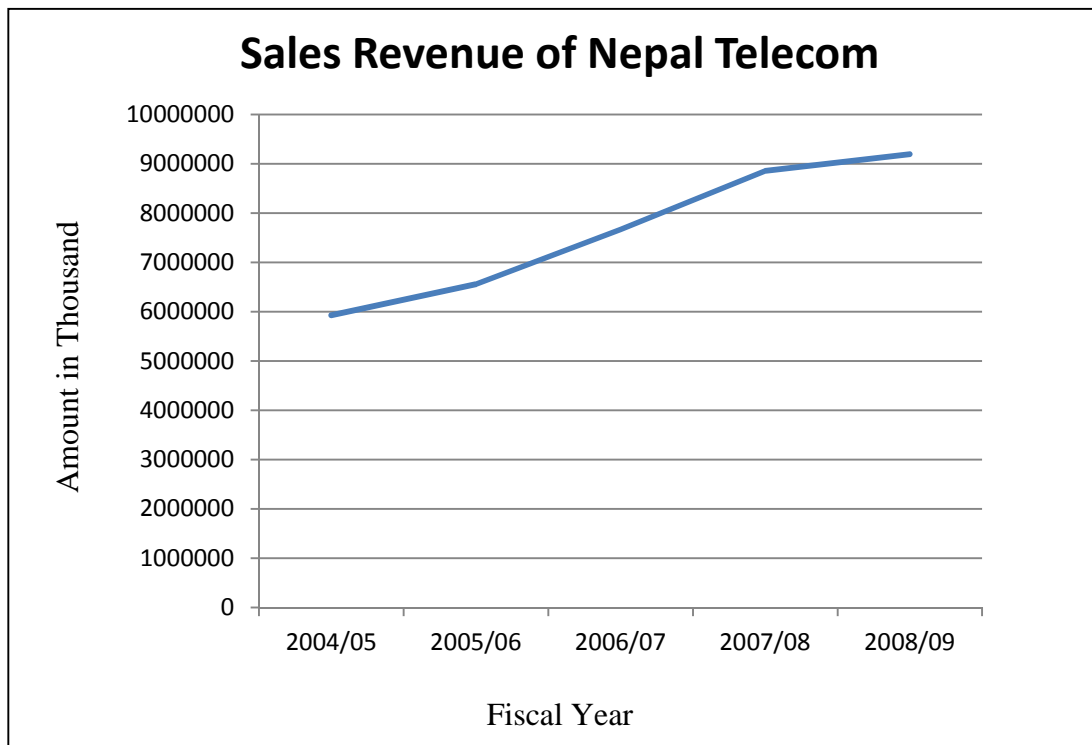


Table no. 4.6 & Figure 4.5 show that the sales revenue of Nepal Telecom is lowest in 2004/05 (Rs.5,92,86,48,000) & highest in 2008/09 (Rs. 9,19,42,97,000). During

the study period the sales revenue is in increasing trend. So, with the help of this data we can assume increasing sales for the next coming years.

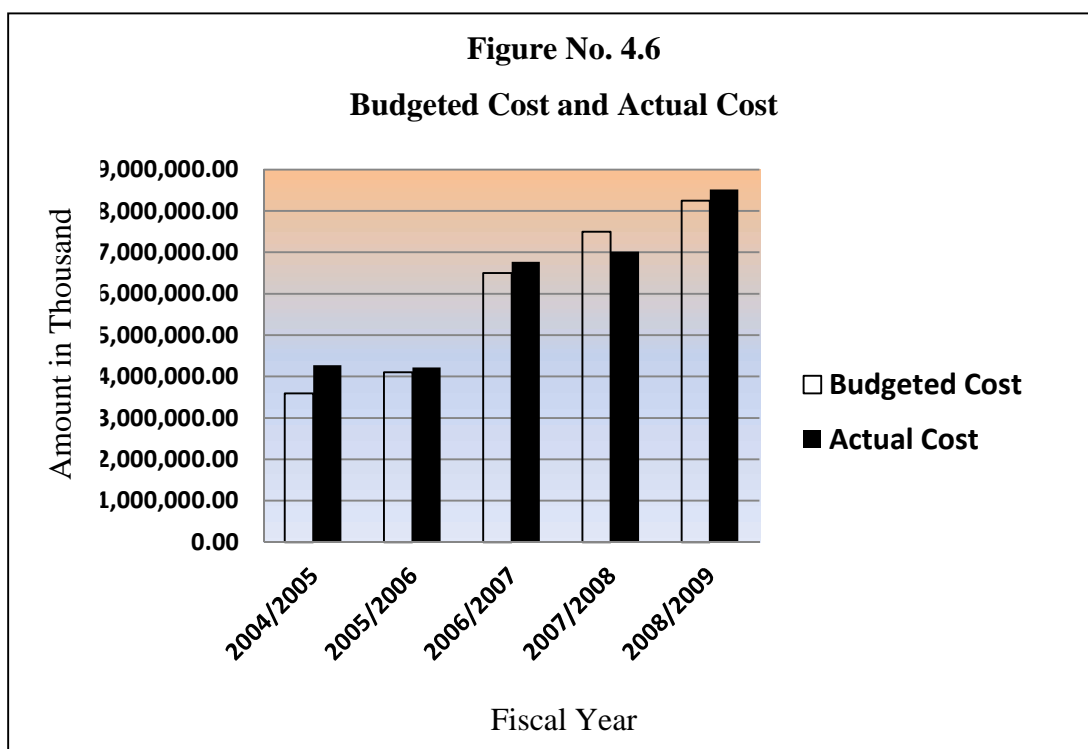
4.2.6 Relationship between Budgeted Cost and Actual Cost

As like the total sales the total cost of Nepal Telecom was also found to be in an increasing trend. The total cost is combined of personnel cost, maintenance and operation cost, depreciation cost and other cost. The budgeted and actual cost of Nepal Telecom is presented in the following table:

Table No. 4.7
Budgeted Cost and Actual Cost Amount in thousands

Year	Budgeted Cost	Actual Cost	Variance %
2004/05	35,95,000.00	42,72,768.00	18.85
2005/06	41,00,000.00	42,15,188.00	2.80
2006/07	65,00,000.00	67,68,302.00	4.12
2007/08	75,00,000.00	70,17,854.00	-6.4
2008/09	82,50,000.00	85,13,592.00	3.19

Source: Nepal Telecom



In the table 4.7 and figure 4.6, the budgeted cost and actual cost of Nepal Telecom is presented for the five years study period. The actual cost is always higher than the budgeted cost except in FY 2007/08. The higher actual cost than the budgeted cost shows the inefficiency of the NTC management in regard of controlling the cost. As if the actual cost is higher than the budgeted cost throughout the study period; the ratio of its difference is in decreasing trend in comparison with the initial year's difference.

4.2.7 Relationship between Sales and Cost

The following table presents the relationship between budgeted cost and budgeted sales and budgeted cost and actual cost of Nepal Telecom throughout the study period.

Table No. 4.8
Relationship between Sales and Cost

Year	Budgeted Sales	Budgeted Cost	Variance (%)	Actual Sales	Actual Cost	Variance (%)
2004/05	65,25,485	35,95,000	44.90	59,28,648	42,72,768	27.93
2005/06	62,54,556	41,00,000	34.40	65,55,992	42,15,188	35.70
2006/07	80,05,000	65,00,000	18.80	76,69,283	67,68,302	11.74
2007/08	90,00,000	75,00,000	16.66	88,55,034	70,17,854	20.74
2008/09	1,10,52,000	82,50,000	25.35	91,94,297	85,13,592	7.40

Source: Nepal Telecom

The table 4.8 shows the relationship between the budgeted sales and budgeted cost in one side and the relationship between actual sales and actual cost in another side. The difference between both the budgeted sales and budgeted cost and actual sales and actual cost is positive in each year throughout the study period. It means the sales are always greater than the cost but the difference between actual sales and budgeted sales is decreasing in last FY.

4.3 Ratio Analysis

Financial Statements contain the information that, if properly analyzed and interpreted, can provide valuable insights into a company's performance and position.

One of the principal tools of financial statement analysis is Ratio Analysis. Ratio Analysis may be done for a variety of purposes, which ranges from a simple analysis of the short-term liquidity position of the firm to a comprehensive assessment of the strengths and weaknesses of the firm in various areas.

The term Ratio refers to the numerical or quantitative relationship between two items/variables. This relationship can be expressed as: (i) percentages, say, net profits are 25% of sales, (ii) fraction (net profit is one-fourth of sales), and (iii) Proportion of numbers (the relationship between net profits and sales is 1:4). These alternative methods of expressing items, which are related to each other for purpose of financial analysis, are referred to as Ratio Analysis. What do the Ratios do? The answer is that they reveal the relationship in a more meaningful way and enable us to draw conclusions from them. The rationale of Ratio Analysis lies in the fact that it makes related information comparable. A single figure by itself has no meaning but when expressed in terms of a related figure, it yields significant inferences.

4.3.1. Liquidity Ratio

Liquidity ratios are used to judge an organizations ability to meet its short term obligation. These ratios are comparison of short term obligation with the resources available and are measured by current ratio and quick ratio. The liquidity ratio reflects the short term financial strength of a firm.

4.3.1.1 Current Ratio (CR)

The relationship between current assets and current liabilities is expressed by Current Ratio. Current Ratio is supposed to be around 2:1 but this standard should not be used rigidly. A higher Ratio here would imply that the company maintains a sound liquidity position from the short-term lenders' view point and from the Corporation's own view point. But a very high Ratio would indicate that a high amount of idle fund being invested in current assets or higher proportion of financing the current assets by dearer permanent sources.

$$\text{Current Ratio (CR)} = \text{Current Assets} / \text{Current Liabilities}$$

Table 4.9
Calculation of Current Ratio

(Rs. in thousands)

Fiscal Year	Current Assets	Current Liabilities	Current Ratio	Straight Line Trend
2004/05	1,23,20,607	58,58,107	2.103	2.107
2005/06	1,53,36,625	80,54,419	1.904	1.9358
2006/07	1,84,24,147	1,01,37,347	1.817	1.7646
2007/08	2,02,13,763	1,26,29,716	1.60	1.5934
2008/09	2,05,98,353	1,47,22,678	1.399	1.422
Average			1.765	

Source: Annual Reports of NTC

Straight Line Trend of the Ratio is: $= 2.2782 - 0.1712(x)$

When $X=6$, $=1.251$, i.e. Expected Current Ratio for next year (year=6)

Where,

Y= estimate of the Current Ratio

X= measure of time when base year 2004/05 = 1

The table 4.9 shows that the average Current Ratio is 1.765 times during the study period. The Ratio 1.765 on an average indicates that the organization has current assets of Rs 1.765 for each rupee of current liabilities. As current liabilities are paid by the current assets, it seems that NTC will be able to pay its current liabilities at the time of requirement. It ranges between a highest of 2.103 times in F/Y 2004/05 AD and a lowest of 1.399 times in F/Y 2007/08. The overall ratio trend does not show any clear direction but in most recent years it seems decreasing slowly. While comparing with the average, one finds that in F/Ys 2004/05 to 2006/07 AD the ratio is higher than the average and for F/Ys 2007/08, 2008/09 AD the ratio is lower than the average. If we see the actual trend, we can find its Current Ratio is not so volatile over time.

The straight line trend fitted on the basis of least square method shows a long run negative growth rate of -0.1712 times per year for this ratio. Based on the fitted trend

line, it can be expected that the liquidity position of the organization would remain sound in future.

4.3.1.2 Quick Ratio/Acid Test Ratio

Quick Ratio is a measure of liquidity designed to overcome the defect of current ratio. The term quick refers to current assets which can be converted into cash immediately or at a short notice without diminution of value. The current assets excluded from this category are inventory and prepaid expenses. So, while calculating quick ratio for NTC, inventory is deducted from total current assets and divided by total current liabilities. Quick ratio is supposed to be around 1:1 but this standard also should be defined by the nature of the organization.

$$\text{Quick ratio (QR)} = \text{Quick assets/Current liabilities}$$

$$\text{Quick assets} = \text{Current Assets} - \text{Inventory}$$

Table 4.10
Calculation of Quick Ratio

(Rs. in thousands)

Fiscal Year	Current Assets	Inventory	Quick Assets	Current Liabilities	Quick Ratio	Straight Line Trend
2004/05	1,23,20,607	5,07,906	1,18,12,701	58,58,107	2.016	2.027
2005/06	1,53,36,625	4,83,231	1,48,53,394	80,54,419	1.844	1.873
2006/07	1,84,24,147	4,00,784	1,80,23,364	1,01,37,347	1.778	1.719
2007/08	2,02,13,763	2,55,250	1,99,58,513	1,26,29,716	1.58	1.566
2008/09	2,05,98,353	3,09,857	2,02,88,496	1,47,22,678	1.38	1.412
Average					1.7196	

Source: Audited Financial Reports of NTC

Straight Line Trend of the Ratio is: $= 2.1804 - 0.1536(X)$

When $X=6$, $= 1.2588$ {i.e. Expected Quick Ratio for next year (year=6)}

Where,

Y= estimate of the quick ratio

X= measure of time when base year 2004/05 = 1

The table 4.10 shows that the average Quick Ratio is 1.7196 times during the study period. The Ratio of 1.7196, on an average, indicates that the organization has quick assets of Rs 1.7196 for each rupee of current liabilities. As average current ratio is 1.7196 throughout the study period, we can see a little difference between these two Ratios (just about 0.091). It means that the least liquid item among the current assets, the inventory, has occupied a very nominal place as part of the total current assets of NTC. In this respect, NTC can be said to have a good liquidity position to fulfill its current obligations when they become due.

The table shows that the ratio ranges between a highest of 2.016 times in F/Y2004/05 AD and a lowest of 1.38 times in F/Y 2008/09 AD. The overall ratio trend does not show any clear direction but in most recent years it seems decreasing slowly. While comparing with the average, one finds that in F/Ys 2004/05 to 2006/07 AD the Ratio is higher than the average and in F/Ys 2007/08 and 2008/09 AD the ratio is lower than the average. If we see the actual trend, we can find that the quick ratio is not so volatile over time.

The straight line trend fitted on the basis of least square method shows a long run positive growth rate of -0.1536 times per year for this ratio. Based on the fitted trend line, it can be expected that the liquidity position of the organization could remain sound in future.

4.3.2 Turnover Ratio / Activity Ratio

Funds of creditors and owners are invested in various assets to generate sales and profits. The better the management of assets, the larger will be the amount of sale. Activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. These ratios are also called turnover ratios because they indicate the speed with which assets are being converted or turned over into sales. So, it involves a relationship between sales and assets reflecting whether assets are managed well. Several activity ratios can be calculated to judge the effectiveness of assets utilization.

4.3.2.1 Inventory Turnover Ratio (ITR)

The inventory turnover ratio (ITR) is the relation between the sales and the inventory of a firm. It indicates the efficiency with which the firm is able to use its inventory to

generate sales revenues. Generally, the higher a firm's inventory turnover, the more efficient its inventory management is supposed to be. The inventory turnover is calculated by dividing sales by closing inventory. This ratio of NTC for the period of five years along with its straight line trend is calculated.

$$\text{Inventory Turnover Ratio} = \text{Sales/Inventory}$$

Table 4.11
Calculation of Inventory Turnover Ratio

(Rs. in thousands)

Fiscal Year	Operating Sales	Inventory	Inventory Turnover	Straight Line Trend
2008/09	54,91,395	5,07,906	10.812	9.643
2008/09	61,59,520	4,83,231	12.747	15.002
2008/09	72,08,086	4,00,784	17.985	20.362
2008/09	83,12,244	2,55,250	32.565	25.72
2008/09	85,84,144	3,09,857	27.70	31.081
Average Inventory Turnover Ratio			20.3618	

Source: Audited Financial Reports of NTC

Straight Line Trend of the Ratio is: $= 4.2836+5.3594 (X)$

When $X=6$, $= 36.44$ {i.e. Expected ITR for next year (year=6)}

Where

Y= estimate of the Inventory Turnover Ratio

X= measure of time when base year 2004/05 = 1

The table 4.11 shows that the average of the inventory turnover ratio of NTC for the past five years is 20.3618 times. The average ratio of 20.3618 indicates that each rupee of inventory is generating sales of Rs. 20.3618. It ranges between a highest of 32.565 times in F/Y 2007/08 AD and a lowest of 10.812 times in F/Y 2004/05 A.D. The overall ratio trend shows an upward direction particularly in the most recent years. If we see the actual trend, we can find that the inventory turnover ratio is mildly volatile over time. But for the last years, the ratio is increasing continuously. And since a high ratio is good from the view point of inventory utilization, the increasing ratio seems favorable for NTC.

The straight line trend fitted on the basis of least square method shows a long run positive growth rate of 5.3594 times per year for this ratio. Based on the fitted trend line, it can be expected that the inventory utilization level of NTC should improve in coming years.

4.3.2.2 Average Age of Inventory

Average age of inventory is just an alternate method of expressing the efficiency of the inventory management. Lesser the time the inventory remains in the go down, better would be the inventory management. The average age of inventory is calculated by dividing 360 by inventory turnover ratio.

$$\text{Average age of inventory} = 360 / \text{inventory turnover ratio}$$

Table 4.12
Calculation of Average Age of Inventory

(No. of days)

Fiscal Year	Inventory Turnover	Average Age of Inventory
2004/05	10.812	33
2005/06	12.747	28
2006/07	17.985	20
2007/08	32.565	11
2008/09	27.70	13
Average		21

Source: Audited Financial Reports of NTC

The table 4.12 show that the average age of inventory of NTC for the study period is 21 days. The average value of 21 indicates that an item of inventory purchased by the firm remains in the godown for 21 days before being released for sale or service to its customers (i.e. a typical item of inventory in the store is replaced every 21 days). The average age ranges between a highest of 33 days in F/Y 2004/05 AD and a lowest of 11days in F/Y 2007/08 AD. The overall value trend shows a downward direction particularly in the most recent years. If we see the actual trend, we can find that the average age of Inventory is showing decreasing tendency over time, particularly for

the last four years. And since a lower value is good from the view point of inventory utilization, the decreasing value is a good indication for NTC.

4.3.2.3 Debtors Turnover Ratio (DTR)

The debtor turnover ratio (DTR) is the relation between the sales and the receivables of a firm. The analysis of debtor turnover ratio supplements the information regarding the liquidity of one item of current assets of the firm. It indicates the efficiency with which the firm is able to turn its credit sales into cash. Generally, the higher a firm's debtor turnover, the more efficient its credit management is supposed to be and vice versa. The debtor turnover is calculated by dividing sales by closing sundry debtors. This Ratio of NTC for the period of five years along with its straight line trend is calculated.

$$\text{Debtors Turnover Ratio} = \text{Sales} / \text{Debtors}$$

Table 4.13
Calculation of Debtors Turnover Ratio

(Rs. in thousands)

Fiscal Year	Operating Sales	Debtors	Debtors Turnover	Straight Line Trend
2004/05	54,91,395	17,60,772	3.119	2.7382
2005/06	61,59,520	24,68,080	2.496	2.8282
2006/07	72,08,087	30,30,277	2.379	2.873
2007/08	83,12,244	26,68,942	3.11	2.918
2008/09	85,84,144	28,25,943	3.037	2.963
Average Debtors Turnover Ratio			2.8282	

Source: Audited Financial Reports of NTC

Straight Line Trend of the Ratio is: $=2.6932+.045 (X)$

When $X=6$, $= 2.9632$ {i.e. Expected DTR for next year (year=6)}

Where,

Y= estimate of the Debtors Turnover Ratio

X= measure of time when base year 2004/05 = 1

The table 4.13 shows that the average DTR of NTC for the past five years is 2.8282 times. It ranges between a highest of 3.119 times in F/Y 2004/05 AD and a lowest of 2.379 times in F/Y 2006/07 AD. The overall trend of the Ratio does not show any specific direction. The ratio seems to be mildly volatile over time but it has shown marked improvements over the most recent years of the study period which, if maintained, can be a very good sign for the credit collection of the NTC. While comparing with the average, one finds that from F/Y 2004/05, 2008/09, and 2007/08 the ratio is higher than the average and for F/Ys 2005/06 to 2006/07 AD the ratio is lower than the average.

The straight line trend fitted on the basis of least square method shows a long run positive growth rate of 0.045 times per year for this ratio. Based on the fitted trend line, it can be expected that the receivable management of NTC should improve in coming years.

4.3.2.4 Average Collection Period (ACP)

The average number of days through which debtors remains outstanding is called average collection period. Average collection period is just an alternate method of expressing the turnover efficiency of the receivables. Lesser the time the receivables remains due, better it is supposed to be. The average collection period is calculated by dividing 360 by debtor turnover ratio.

$$\text{Average Collection Period (ACP)} = \text{Debtors} * 360 / \text{Sales}$$

Table 4.14
Calculation of Average Collection Period

(Rs. in thousands)

Fiscal Year	Debtors	Operating Sales	ACP (Days)
2004/05	17,60,772	54,91,395	115
2005/06	24,68,080	61,59,520	144
2006/07	30,30,277	72,08,087	151
2007/08	26,68,942	83,12,244	115
2008/09	28,25,943	85,84,144	116
5-Yearly Average			128

Source: Audited Financial Reports of NTC

The table 4.14 shows that the average collection period of NTC over the five years of study period is 128 days. The average value of 128 indicates that an invoice of credit receivable remains outstanding for 128 days before being collected from the customers (i.e. a typical debtor of NTC pays his/her dues 128 days after the purchase of goods/consumption of service). The ACP ranges between a highest of 151 days in F/Y 2006/07 and a lowest of 115 days in F/Y 2004/05A.D. and 2007/08 A D. While comparing with the average, one finds that from F/Y 2004/05 to 2008/09, the values are higher than the average and for F/Ys 2005/06 and 2006/07. If we take a close look at the actual trend, we can find that the average collection period is showing decreasing tendency over later half periods of the study periods. And since a lower value is good from the view point of collection efficiency, the decreasing value may be a good indication for NTC in coming years.

4.3.2.5 Total Assets Turnover Ratio

The total assets turnover (TATR) is the relation between the sales and the total assets of a firm. It indicates the efficiency with which the firm is able to use its all assets to generate sales revenues. Generally, the higher a firm's total assets turnover, the more efficiently its assets said to be. The total assets turnover is calculated by dividing sales by total assets. This ratio of NTC for the period of five years along with its graphic trend is shown in the following table.

$$\text{Total Assets Turnover Ratio (TATR)} = \text{Sales} / \text{Total assets}$$

Table 4.15
Calculation of Total Assets Turnover Ratio

(Rs. in thousands)

Fiscal Year	Total Sales	Total Assets	TA Turnover	Straight Line Trend
2004/05	59,28,648	2,15,84,396	0.2747	0.2689
2005/06	65,55,992	2,51,15,657	0.2610	0.2665
2006/07	76,69,283	2,97,24,632	0.2580	0.2641
2007/08	88,55,034	3,30,80,441	0.2670	0.262
2008/09	91,94,297	3,54,30,582	0.2595	0.2592
Average of Total Assets Turnover			0.26404	

Source: Audited Financial Reports of NTC

Where,

$$\text{Total Assets} = \text{Current Assets} + \text{Total Fixed Assets}$$

$$\text{Total Fixed Assets} = \text{Net fixed assets} + \text{Capital work in progress} + \text{Investments}$$

Straight Line Trend of the Ratio is: $= 0.27136 - 0.00244 (X)$

When $X=6$, $= 0.2567$ {i.e. Expected TAT Ratio for next year (year=6)}

Where,

Y= estimate of the Total Assets Turnover Ratio

X= measure of time when base year 2004/05 = 1

The table 4.15 shows that the average of the TATR of NTC for past five years is 0.26404 times. The Ratio seems to be a little volatile as it ranges from 0.2580 in F/Y 2006/07 to 0.2747 in F/Y 2004/05 AD. The average Ratio of 0.26404 indicates that each rupee of investment in assets is generating sales of Rs. 0.26404 every year. The overall ratio trend shows a random movement of the ratio over the five year period. Though the inventory turnover ratio is mildly volatile over time, but for the last 3-4 years, the ratio is decreasing continuously which should be the real cause of concern for the NTC. Unless the firm generates sufficient volume, the further investment in assets will not be justified.

The straight line trend fitted on the basis of least square method shows a long run negligible negative growth rate of -0.00244 times per year for this ratio. If this ratio is to move as per the fitted trend line in future, it can be expected that the total assets utilization level of NTC should remain at least constant in coming years. Continuous expansion of its assets over the recent years followed by marginal increase in sales has primarily caused TATR to remain stable. If the firm cannot utilize this expanded capacity in the near future, the firm may have to retrench its assets investment or else it would face stagnant TATR Ratio.

4.3.2.6 Fixed Assets Turnover Ratio (FATR)

The fixed asset turnover measures the efficiency with which the firm has been using its fixed (earning) assets to generate sales. This ratio shows the relationship between sales and net fixed assets of a firm. Generally, higher turnover is preferred because it reflects greater efficiency in the utilization of fixed assets. The fixed asset turnover is

calculated by dividing the firm's sales by its net fixed assets. This ratio of NTC along with its graphical trend for the period of five year is shown as follows:

$$\text{Fixed Assets Turnover Ratio (FATR)} = \text{Sales} / \text{Net Fixed Assets}$$

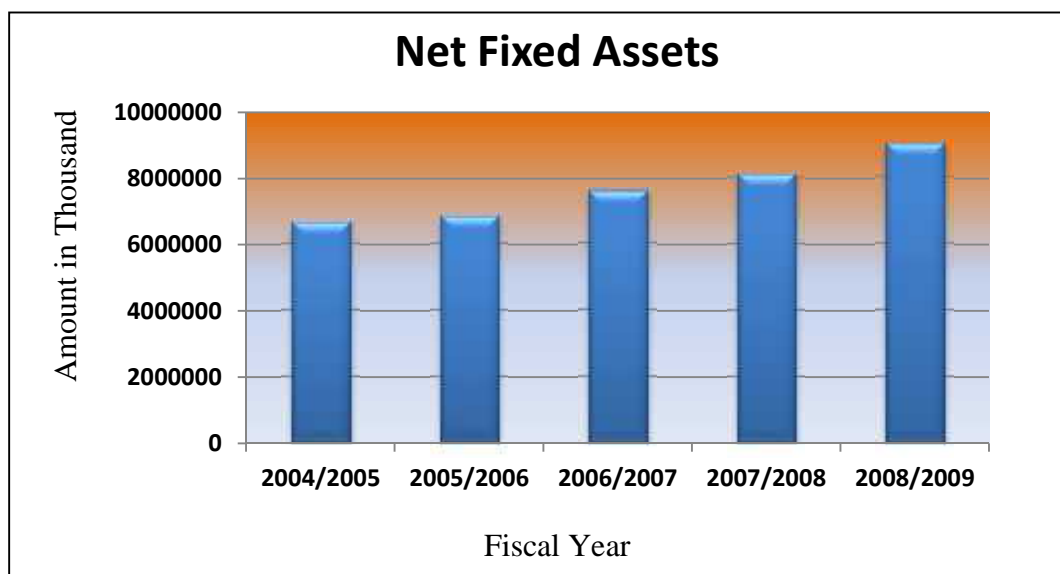
Table 4.16
Calculation of Fixed Assets Turnover Ratio

(Rs. in thousands)

Fiscal Year	Operating Sales	Net Fixed Assets	FA Turnover	Straight Line Trend
2004/05	54,91,395	66,72,252	0.823	0.8534
2005/06	61,59,520	68,40,397	0.900	0.8912
2006/07	72,08,087	76,07,614	0.947	1.2692
2007/08	83,12,244	80,94,882	1.026	1.307
2008/09	85,84,144	90,40,917	0.949	1.3448
Average of Fixed Assets Turnover			0.929	

Source: Audited Financial Reports of NTC

Figure 4.7
Net Fixed Assets of Nepal Telecom



Straight Line Trend of the Ratio is: $= 0.8156 + 0.0378(X)$

When $X=6$, $= 1.0424$ {i.e. Expected FAT for next year (year=6)}

Where,

Y= estimate of the Fixed Assets Turnover Ratio

X= measure of time when base year 2004/05 = 1

From the table 4.16 & figure 4.7, it is clear that the fixed assets turnover of NTC is in increasing trend. It ranges from a minimum of 0.823 times in F/Y 2004/05 AD to a maximum of 1.026 times in F/Y 2007/08. While comparing with the average, one finds that in initial two years, the ratios are below the average and for later three years, the ratios are above the average. The average ratio is 0.929 times which indicates that each rupee of investment in fixed assets is generating sales of 92.9 paisa. Although average of this Ratio is below 1.00 marks, the good aspect is that it is showing a clear upward trend in later half of the study period.

The straight line trend fitted on the basis of least square method shows a sizeable long run positive growth rate of 0.0378 times per year for this ratio. If this ratio is to move as per the fitted trend line in future, it can be expected that the fixed assets utilization level of NTC should improve, at least in coming years. NTC should try to increase its current level of fixed assets utilisation in the coming future.

4.3.2.7 Working Capital Turnover Ratio (WCT)

The working capital turnover (WCT) ratio measures the efficiency with which the firm has been using its net current assets (revolving assets) to generate sales. This ratio shows the relation between sales and net current assets of a firm. Generally, higher turnover is preferred because it reflects greater efficiency in the utilization of net current assets. Here working capital means only that part of current assets which is financed by the long term sources. The working capital turnover is calculated by dividing the firm's sales by its net working capital. This ratio of NTC along with its graphical trend for the period of five year is given below:

Working Capital Turnover Ratio (WCTR) = Sales / Net Working Capital

Table 4.17
Calculation of Working Capital Turnover Ratio

(Rs. in thousands)

Fiscal Year	Operating Sales	CA	Total CL	Net WC	WC Turnover	Straight Line Trend
2004/05	54,91,395	1,23,20,607	58,58,107	64,62,500	0.917	0.7822
2005/06	61,59,520	1,53,36,625	80,54,419	72,82,206	0.900	0.9385
2006/07	72,08,087	1,84,24,147	1,01,37,347	8,28,68,000	0.925	1.0948
2007/08	83,12,244	2,02,13,763	1,26,29,716	75,84,047	1.167	1.2511
2008/09	85,84,144	2,05,98,353	1,47,22,678	58,75,675	1.565	1.4074
Average of Working Capital (WC) Turnover					1.0948	

Source: Audited Financial Reports of NTC

Where,

$$\text{Total Current Liabilities} = \text{Current liabilities} + \text{Provision}$$

Straight Line Trend of the Ratio is: $= 0.6259 + 0.1563(X)$

When $X=6$, $= 1.5637$ {i.e. Expected WCT for next year (year=6)}

Where,

Y= estimate of the Working Capital Turnover Ratio

X= measure of time when base year 2004/05 = 1

The table 4.17 shows that the average of the WCT Ratio of NTC for past five years is 1.0948 times. The ratio seems to be increasing as it ranges from 1.565 in 2008/09 AD to 0.9 in 2004/05 AD. The average ratio of 1.0948 indicates that each rupee of investment in working capital is generating sales of Rs. 1.0948. The overall ratio trend shows upward movement of the ratio over the five year period. It means that for the 5 years, the ratio is increasing continuously which should be the real cause of concern for the NTC.

The straight line trend fitted on the basis of least square method shows a long run sizeable growth rate of 0.1563 times per year for this ratio. If this ratio is to move as per the fitted trend line in future, it can be expected that the total assets utilization

level of the company would be to the level of satisfactory in the near future. Continuous addition in working capital over the recent years followed by less than proportional increase in sales has primarily caused WCT to nosedive over the study period. If the firm cannot utilize this added investment in working capital in the near future, the company may have to retrench its working capital investment or else it would face further decline in WTC Ratio.

4.3.2.8 Capital Employed Turnover Ratio (CET)

Funds of owners and creditors are invested in various assets to generate sales, so the invested capital must be compared & analyzed with sales in order to examine the efficiency of the company's management in generating revenues from available capital. The Sales to Capital Employed Ratio, also called Capital Employed Turnover, have been computed to know how efficiently the long term capital is employed in generation of revenues. Higher Ratio is desirable from the viewpoint of owners as well as creditors. The Ratio shows the future sales promotion condition by appropriate use of long term debt and capital.

Capital Employed Turnover Ratio (CET) = Sales/Total Capital Employed

Capital Employed Turnover Ratio (CET) = Total of Net Worth + Long Term Liabilities

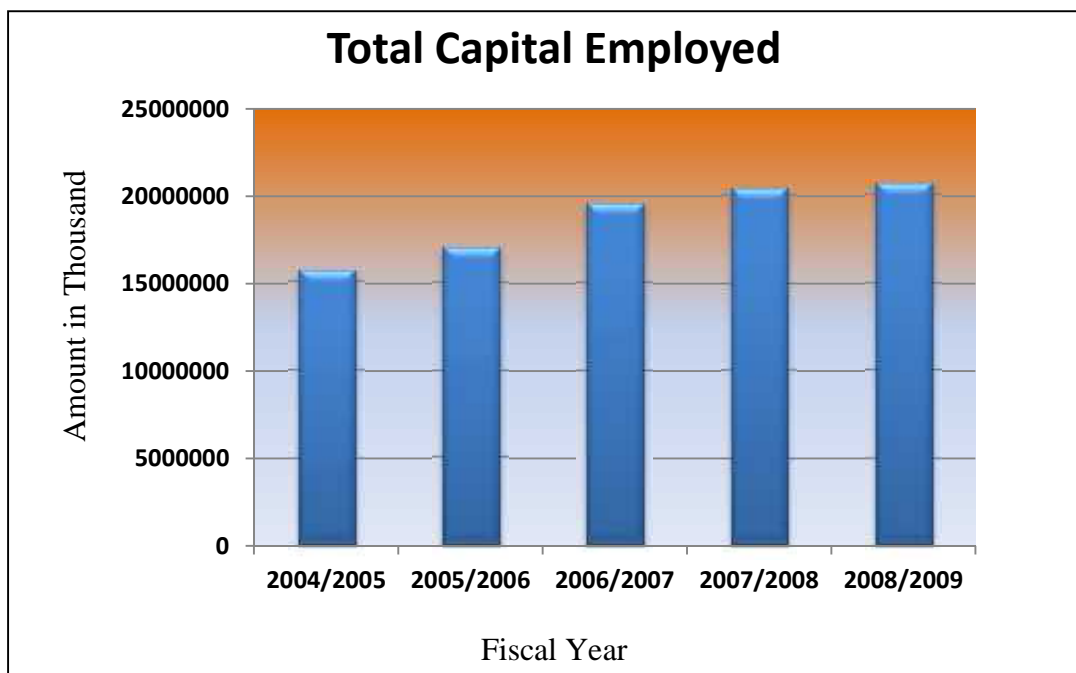
Table 4.18
Calculation of Capital Employed Turnover Ratio

(Rs. in thousands)

Fiscal Year	Total Sales	Capital Employed	CE Turnover	Straight Line Trend
2000/01	59,28,648	1,57,26,288	0.372	0.3664
2004/05	65,55,992	1,70,61,238	0.384	0.3854
2005/06	76,69,283	1,95,87,285	0.391	0.4044
2006/07	88,55,034	2,04,50,725	0.432	0.4234
2007/08	91,94,297	2,07,07,904	0.443	0.4424
Average of Working Capital (WC) Turnover			0.4044	

Source: Audited Financial Reports of NTC

Figure 4.8
Total Capital Employed



Straight Line Trend of the Ratio is: $= 0.3474 + 0.019(X)$

When $X=6$, $= 0.4614$ {i.e. Expected CET for next year (year=6)}

Where, Y= estimate of the Capital Employed Turnover Ratio

X= measure of time when base year 2004/05 = 1

Table 4.18 shows that the average of the CET Ratio of NTC for past five years is 0.4044 times which is lower than the general standard average of at least 1.00 times for this type of business. The Ratio ranges from the lowest of 0.372 in F/Y 2004/05 AD to the highest of 0.443 in 2008/09 AD. The average Ratio of 0.4044 indicates that each rupee of investment in permanent capital is generating sales of just 40.44 paise. The overall Ratio Trend shows a positive movement of the Ratio over the five year period. While comparing with the average, one finds that in F/Ys 2004/05, 2002/01 and 2006/07 AD, the Ratio is higher than the average and for F/Ys 2007/08, 2008/09 AD the Ratio is lower than the average.

The Straight Line Trend fitted on the basis of least square method shows a long run positive growth rate of 0.019 times per year for this Ratio. If this Ratio is to move as

per the fitted Trend Line in future, it can be expected that the volume generated by the permanent capital of the company should increase in coming years.

4.3.3 Leverage Ratio

The short - term creditors like bankers and suppliers of raw materials are more concerned with the firm's current debt paying ability. On the other hand, long term creditors, like debenture holders, financial institutions, etc. are more concerned with the firm's long term financial strength. In fact, a firm should have a strong, short as well as long term financial position. To judge the long term financial position of the firm, financial leverage, or Capital Structure Ratios are calculated. These ratios indicate mix of the funds provided by owners and lenders. As a general rule, there should be an appropriate mix of debt and owners equity in financing the firm's assets.

4.3.3.1 Total Debt Ratio (TDR)

The relationship between creditors' funds and total assets is known as proprietary ratio. This ratio measures the proportion of total assets financed by owners' funds. This ratio intends to show the long-term financial composition/strength of the company. Higher Ratio means high financial risk and lower Ratio means not-proper utilization of leverage benefit. So, an average position between the two extremes is favourable .It is calculated by dividing total liabilities by total assets. The Total Debt Ratio along with its Straight Line Trend of NTC for the past five year period is shown in the following table.

$$\text{Total Debt Ratio} = \text{Total debt} / \text{Total assets}$$

$$\text{Total Debt} = \text{Current liabilities} + \text{Long term debt}$$

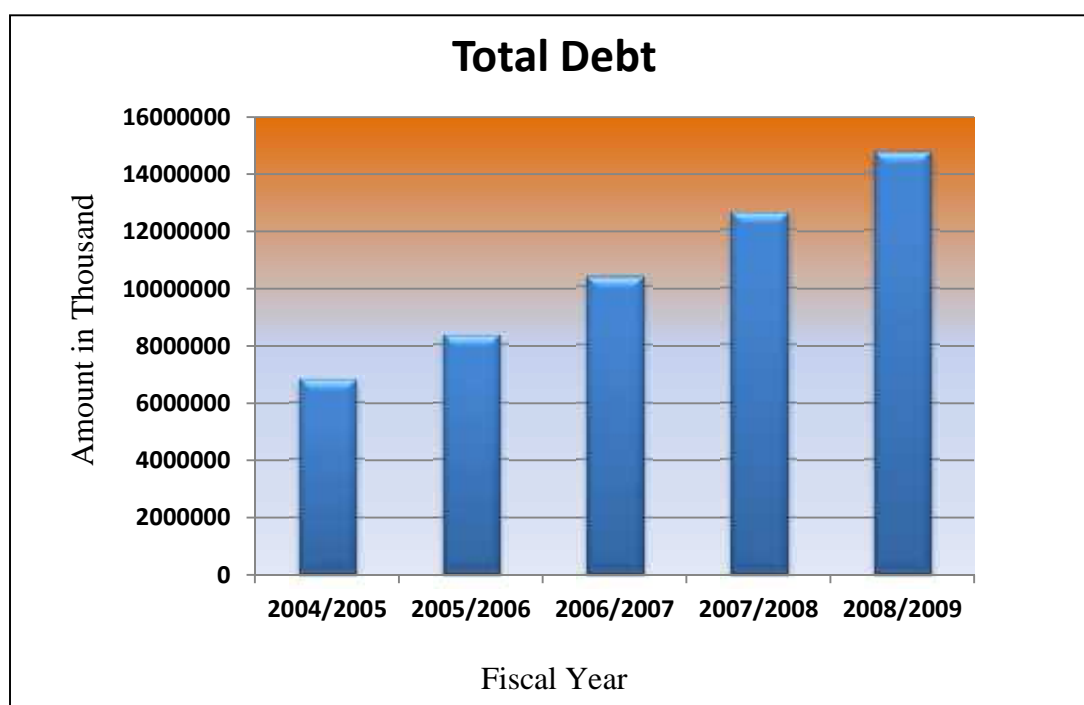
Table 4.19
Calculation of Total Debt Ratio

(Rs. in thousands)

Fiscal Year	Total Debt	Total Assets	Total Debt Ratio	Straight Line Trend
2004/05	68,10,458	2,15,84,396	0.316	0.3094
2005/06	83,54,409	2,51,15,657	0.333	0.3343
2006/07	1,03,71,127	2,97,24,632	0.349	0.3592
2007/08	1,26,40,965	3,30,80,441	0.382	0.3841
2007/08	1,47,46,917	3,54,30,582	0.416	0.409
Average of Total Debt Ratio			0.3592	

Source: Audited Financial Reports of NTC

Figure 4.9
Total Debt of Nepal Telecom



Where, Total Debt= Long Term Liab+ Current Liab and provision

Total Assets= Current Assets+ Fixed Assets+ Investments+ Capital Work in Progress

Straight Line Trend of the Ratio is: $=0.2845+0.0249(X)$

When X=6, $= 0.4339$ {i.e. Expected CET Ratio for next year (year=6)}

Where, Y= estimate of the Total Debt Ratio

X= measure of time when base year 2004/05 = 1

In the table 4.19, Total Debt to Total Asset Ratio of NTC from F/Y 2004/05 to F/Y 2008/09 AD is presented. The total debt of NTC includes the all short term as well as long term loans included in the balance sheet of NTC, presented in the appendix of this thesis. The total assets include the entire assets of NTC shown in the balance sheet. During the F/Y 2004/05, the actual value of the ratio during each of the successive years of the period seems to be increasing. The average ratio for the five year period indicates that the creditors have contributed just around 35% of the fund requirement of the business. It seems that in recent years the Corporation, recognizing the risk and utilising the surplus profit, has increased the debt.

The Straight line trend fitted on the basis of least square method shows a long run growth rate of 0.0249 times per year for this ratio. If this ratio is to move as per the fitted trend line in future, the debt would increase so fast that most of the benefits of leverage can be recognized.

4.3.3.2 Debt Equity Ratio (DE)

Debt to Equity Ratio is another type of measure of financial structure. This Ratio shows the position of total debt relative to the owner's capital. This relationship between total debt and net worth shows the outsiders' liabilities as a percentage of owners' capital. There is no exact standard norm of this ratio, but in common practice this ratio will be good for this type of business, if it is below 1.5:1. This Ratio is calculated by dividing total debt by net worth. The table given below shows the Debt Equity Ratio of NTC for five years period.

Debt Equity Ratio (DE) = Total Debt / Net Worth

Net worth = Total of equity capital + Reserve and surplus – Deferred expenditure

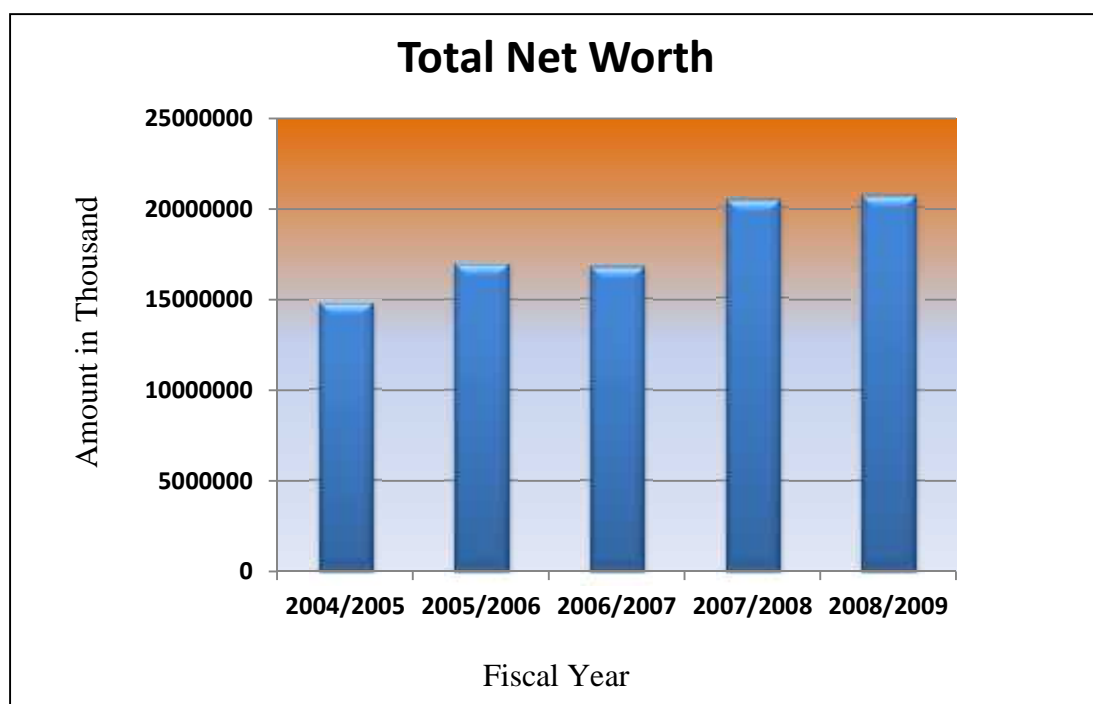
Table 4.20
Calculation of Debt Equity Ratio

(Rs. in thousands)

Fiscal Year	Total Debt	Net worth	Debt Equity Ratio	Straight Line Trend
2004/05	68,10,458	1,47,73,937	0.455	0.4344
2005/06	83,54,409	1,69,27,414	0.494	0.4982
2006/07	1,03,71,127	1,67,61,248	0.531	0.562
2007/08	1,26,40,965	2,04,39,476	0.618	0.6258
2008/09	1,47,46,917	2,06,83,665	0.712	0.6896
Average of Debt Equity Ratio			0.562	

Source: Audited Financial Reports of NTC

Figure 4.10
Total Net Worth of Nepal Telecom



Straight Line Trend of the Ratio is: $= 0.3706 + 0.0638 (X)$

When $X=6$, $= 0.7534$ {i.e. Expected Debt-Equity Ratio for next year (year=6)}

Where, Y = estimate of the Debt-Equity Ratio

X = measure of time when base year 2004/05 = 1

The table 4.20 shows that the Total Debt to Net worth Ratio of NTC is increasing year by year. This trend indicates that the organization deliberately wants to increase its financial leverage/risk. The Ratio ranges from a higher of 0.712 in F/Y 2008/09 AD to a lower of 0.455 in F/Y 2004/05 AD. The average is 0.562 which means that for each rupee of equity holder's money, the debt holders have contributed 56 paise to finance the firm's operation. This Ratio is lower than average in initial three years and higher than the average in the final two years of the study period. The average of this Ratio over the study period is much lower than the general industry norm of 1.5:1.

The Straight Line Trend fitted on the basis of least square method shows a long run sizeable positive growth rate of 0.0638 times per year for this ratio. If this ratio is to move as per the fitted Trend Line in future, it can be expected that the debt financing level of the company would be almost two third the equity financing of the organization in the coming year.

4.3.3.3 Long Term Debt to Capital Employed Ratio (LTD TO CE)

The relationship between creditors' funds and firm's capital can also be expressed in terms of another Leverage Ratio, known as LTD to CE Ratio. Here, the long term creditors' funds are measured with the total capitalization of the firm and not merely with the NW. The total capitalization or capital employed includes the total explicit cost bearing debt (long term) and shareholders' equity. This Ratio is computed by dividing LTD by CE. The table given below shows the LTD to CE Ratio of NTC for five years of study period. And the figure shows the Trend Line for this Ratio.

Long Term Debt to capital employed ratio = Long Term Debt / Capital
Employed

Table 4.21
Calculation of Long - Term Debt to Capital Employed Ratio

(Rs. in thousands)

Fiscal Year	Long Term Debt	Capital Employed	CE to NW Ratio	Straight Line Trend
2004/05	9,52,351	1,57,26,288	0.06055	0.0192
2005/06	2,99,990	1,70,61,238	0.01758	0.02359
2006/07	2,33,780	1,95,87,285	0.01193	0.02803
2007/08	11,249	2,04,50,725	0.00055	0.03241
2008/09	24,239	2,07,07,904	0.00117	0.0368
Average of Long Term Debt Ratio			0.018356	

Source: Audited Financial Reports of NTC

Straight Line Trend of the Ratio is: $= 0.014718 + 0.004438 (X)$

When $X=6$, $= 0.041346$ {i.e. Expected LTD to CE Ratio for next year (year=6)}

Where, Y = estimate of the LTD to CE Ratio

X = measure of time when base year 2004/05 = 1

The Ratio shows steeply decreasing pattern over time. The average Ratio of 1.8% implies that out of total capitalization, only about one-fifth is financed by permanent debt sources and remaining four-fifth by equity fund. This may imply a good margin of safety to the company lenders' point of view. But, from the view point of the owners, the reduction in this ratio position signifies that the company is not properly utilising the benefits of the leverage for magnifying the return to the shareholders.

The Straight Line Trend fitted on the basis of least square method shows a long run growth rate of 0.004438 times per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that long term debt of NTC would take subsequent part in coming year.

4.3.3.4 Interest Coverage Ratio(IC)

Interest Coverage (IC) ratio is one of the most important Coverage Ratio used to test the firm's debt- serving capacity. This Ratio is computed by dividing EBIT by interest expenses. This Ratio, as the name implies shows how many times the interest charges are covered by EBIT. A higher IC Ratio is desirable, but too high indicates that firm is conservative in using debt and firm is not using enough creditors' securities to the best advantage of shareholders. A lower IC Ratio indicates excessive use of debt or inefficient/weak operational profit. This Ratio for NTC for the period of F/Y 2004/05 to 2008/09 is calculated as follows.

$$\text{Interest Coverage Ratio} = \text{EBIT} / \text{Interest}$$

Table 4.22
Calculation of Interest Coverage Ratio

(Rs. in thousands)

Fiscal Year	Interest Expenses	EBIT	IC Ratio	Straight Line Trend
2004/05	1,43,654	31,86,669	22.1829	2,812.15
2005/06	38,407	33,58,570	87.4468	3,463.621
2006/07	15,955	41,09,072	257.5413	4,115.092
2007/08	3,292	45,53,959	1383.3410	4,766.563
2008/09	696	49,22,225	7072.1620	5,418.03
Average of Total Debt Ratio			1764.535	

Source: Audited Financial Reports of NTC

Straight Line Trend of the Ratio is $= 2160.685+651.471 (X)$

When $X=6$, $= 6069.51$ {i.e. Expected IC Ratio for next year (year=6)}

Where, Y = estimate of the Interest Coverage Ratio

X = measure of time when base year 2004/05 = 1

The table 4.22 shows the Interest Coverage Ratio of NTC over the study period. It seems that the Organization has excellent and all time increasing Coverage Ratios over the period i.e. the debt serving capacity of NTC seems quite favourable. But this is a good performance in disguise because we can see that the organization is reducing

its use of long term debt over the years so fast that the fixed interest burden of the organization becomes almost negligible in the most recent year. The average Interest Coverage Ratio is 1764.535 times which implies that NTC has been able to cover the interest expenses by a good margin of safety. In other words, the organization seems to be able to earn good operating profit to meet its fixed obligations.

During the study period, the ratio ranges from a minimum of 22.1829 times in F/Y 2004/05 to a maximum of 7072.16 times in F/Y 2008/09. In last two years, there has been remarkable improvement in Coverage Ratio but this all is more because of dwindling interest expenses rather than excellent operating profits. So, the performance of the firm in terms of Interest Coverage Ratio should be judged cautiously in this case.

The Straight Line Trend fitted on the basis of least square method shows a long run sizeable positive growth rate of 651.471 times per year for this Ratio. If this Ratio is to move as per the fitted trend line in future, it can be expected that the debt servicing ability of the firm would not be any cause of concern in coming years.

4.3.4 Profitability Ratio

A company should earn profits to survive over a long period of time. Therefore, profits are essential for a company. But, it does not mean that every action initiated by management of a company should be aimed at maximizing profits. The social consequence of the actions does also matter. So, maximum profit consistent with social responsibility should be the long run objective. It is unfortunate that the word 'profit' is looked upon as a term of abuse since some firms always want to maximize profits at the cost of employees, customers and society. Except such infrequent cases, it is a fact that sufficient profits must be earned to sustain the operation of the business, to be able to obtain funds from investors for expansion, growth and to contribute towards the social overheads for the welfare of the society.

Profit is the difference between revenues and expenses over a period of time. Profit is the ultimate 'output' of a company, and it will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of the company in terms of profits. The profitability Ratio is calculated to measure the operating efficiency of the company. Creditors and owners both are

interested in the profitability of the firm. If company is making profits regularly, creditors will also be assured of getting their dues on time.

4.3.4.1 Net Profit Margin (NPM)

The Net Profit Margin measures the relationship between profit and sales and indicates management's efficiency in manufacturing, administering and selling the product. This ratio is the overall measure of the firm's ability to turn each rupee sales into net profit. A high Net Profit Margin would ensure adequate return to the owners as well as enable the firm to withstand adverse economic conditions. A low Net Profit Margin has the opposite implications. However, a firm with low Net Profit Margin can earn a high rate of return on investment if it has a higher Inventory Turnover. The Net Profit Margin is measured by dividing profit after taxes by sales.

$$\text{Net Profit Margin} = \text{Net Profit after Tax} / \text{Sales}$$

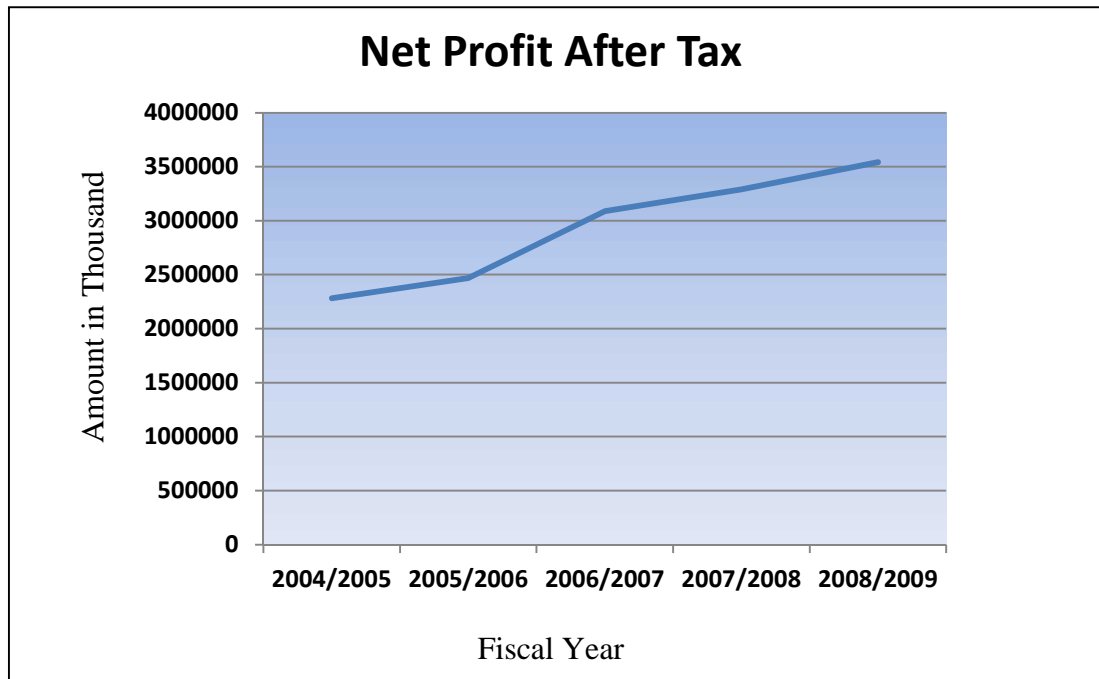
Table 4.23
Calculation of Net Profit Margin Ratio

(Rs. in thousands)

Fiscal Year	NPAT	Total Sales	NP Margin	Straight Line Trend
2004/05	22,81,997	59,28,648	0.384	0.3842
2005/06	24,67,930	65,55,992	0.376	0.3839
2006/07	30,87,782	76,69,283	0.402	0.3836
2007/08	32,90,117	88,55,034	0.371	0.3833
2008/09	35,42,461	91,94,297	0.385	0.383
Average of Net Profit Margin Ratio			0.3836	

Source: Audited Financial Reports of NTC

Figure 4.11
Net Profit of NTC



Straight Line Trend of the Ratio is= **0 .3845-0.0003 (X)**

When X=6, = 0.3827 {i.e. Expected NPM for next year (year=6)}

Where, Y= estimate of the Net Profit Margin Ratio

X= measure of time when base year 2004/05 = 1

The table 4.23 shows that the average of the NPM Ratio of NTC for past five years is 38.36% which is higher than the general standard average of at least 25% for this line of business. The ratio seems to be stable barring over the study period. The average Ratio of 0.3836 times indicates that each rupee sales is contributing 0.3836 paisa for rewarding the owners. The overall ratio trend shows a small swing in either direction of the ratio within the range of 37.6% to 40.20% over the five year period. The computations show that the Net Profit Margin upon sales is favorable. With the low Turnover Ratio, further decline in NPM is sure to have a negative impact on the equity holders' return.

The Straight Line Trend fitted on the basis of least square method shows a long run negligible positive growth rate of -0.0003% per year for this ratio. If this ratio is to move as per the fitted trend line in future, it can be expected that the profit margin level of the company in coming years should remain at stable.

4.3.4.2 Modified Net Profit Margin (MNP)

Depending on the concept of profit employed by the company, Net Profit Margin Ratio can be calculated differently. The company's capital structure, non - operating income and non - operating expenses etc. are some factors that affect the earnings. So among different factors, capital structure is an important factor which can bring important variation in this ratio and can make comparison distorted. Because the conventional measure of net profit margin computed above is affected by the firms financing policy. So, for a true comparison free of biases of the leverage ratio variation, profit should also include the financing charges. Thus, the revised net profit margin can be computed in the following way:

$$\text{Net Profit Margin} = (\text{NPAT} + \text{Interest after Tax}) / \text{Sales}$$

Table 4.24
Calculation of Modified Net Profit Margin Ratio

(Rs. in thousands)

Fiscal Year	NPAT	Int. AT	NPAT+ Int. AT	Total Sales	NPM	Straight Line Trend
2004/05	22,81,997	1,05,089.77	22,99,306.77	59,28,648	0.388	0.3816
2005/06	24,67,930	26,747.98	23,53,276.98	65,55,992	0.359	0.3823
2006/07	30,87,782	12,063.87	31,49,287.87	76,69,283	0.411	0.383
2007/08	32,90,117	2,195.00	32,92,312.00	88,55,034	0.372	0.3837
2008/09	35,42,461	501.00	35,42,461.00	91,94,297	0.385	0.3844
Average of Net Profit Margin Ratio					0.383	

Source: Audited Financial Reports of NTC

Straight Line Trend of the Ratio is: = **0.3809+0.0007 (X)**

When X=6, = 0.3851 {i.e. Expected Modified NPM Ratio for next year (year=6)}

Where, Y= estimate of the Modified NPM Ratio

X= measure of time when base year 2004/05 = 1

If we eliminate the effect of financing charges from the Net Profit Margin, the Trend Line deteriorates and turns into negative. Now ranges between a highest of 47.6% in F/Y 2004/05 to 35.9% in F/Y 2005/06 AD. Besides these, the Modified Net Profit

Margin Ratio has similar strengths and weaknesses as general Net Profit Margin Ratio calculated above.

4.3.4.3 Operating Expenses Ratio (OE)

Operating expenses constitute service/product costs, administrative costs and selling costs. The Operating Expenses Ratio indicates the average aggregate variation in expense. In general, higher Operating Expenses Ratio means inefficiency due to higher operating cost relative to sales. A lower Operating Expenses Ratio is favorable since it will leave a higher amount of operating income to meet interest, taxes, bonus, dividend and plough back of profit in the firm. It is measured by dividing operating expenses by sales.

$$\text{Operating Expenses Ratio (OE)} = \text{Operating Expenses} / \text{Sales}$$

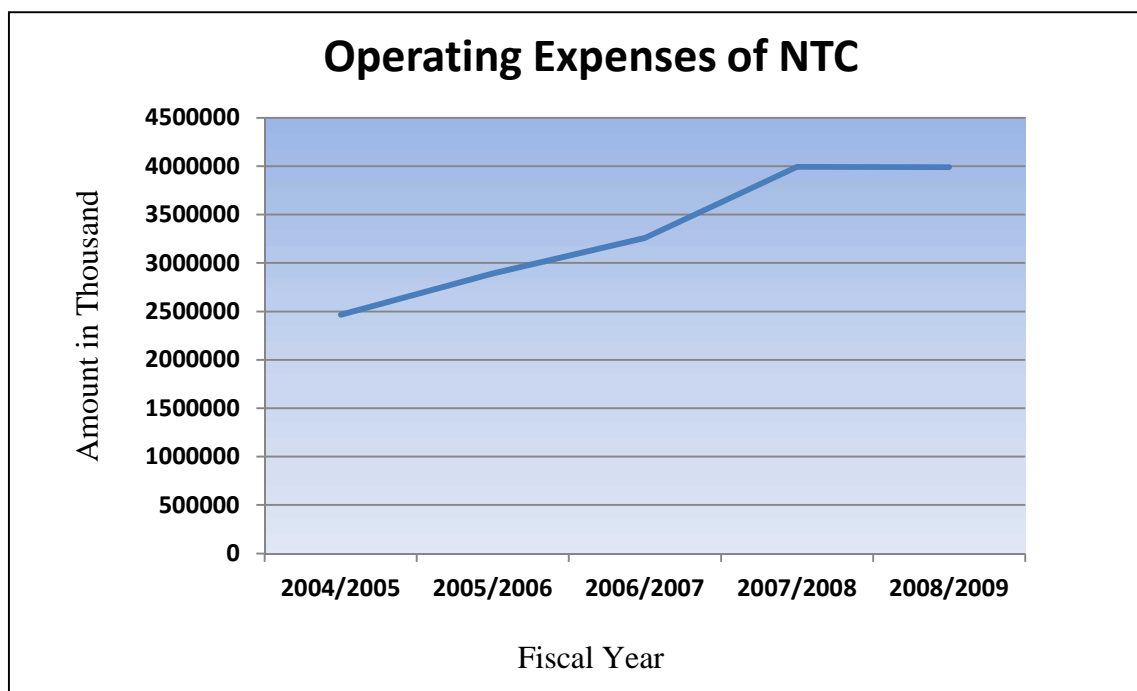
Table 4.25
Calculation of Operating Expenses Ratio

(Rs. in thousands)

Fiscal Year	Op. Expenses	Total Sales	Op. Exp. Ratio	Straight Line Trend
2004/05	24,63,758	59,28,648	0.416	0.4242
2005/06	28,91,309	65,55,992	0.441	0.4288
2006/07	32,58,571	76,69,283	0.425	0.4334
2007/08	39,91,863	88,55,034	0.451	0.438
2008/09	39,90,361	91,94,297	0.434	0.4426
Average of Operating Expenses Ratio			0.4334	

Source: Audited Financial Reports of NTC

Figure 4.12
Operating Expenses of NTC



Straight Line Trend of the Ratio is: $Y = 0.4196 + 0.0046(X)$

When $X=6$, $Y = 0.4472$ {i.e. Expected OE Ratio for next year (year=6)}

Where, Y = estimate of the Operating Expense Ratio

X = measure of time when base year 2004/05 = 1

The table 4.25 shows that the average OE Ratio of NTC for past five years is 43.34% which is lower than the general standard average of around 50% for this line of business. The Ratio seems to be stable but slightly in increasing trend as it ranges from a lower of 41.6% in F/Y 2004/05 to 45.10% in F/Y 2007/08 AD. The average ratio of 43.34 indicates that the firm incurs a cost of 43.34paise for each rupee of sales it generates. Barring F/Y 2004/05, the ratio is increasing on year to year basis. Though the operating expense Ratio is relatively stable over time, but for the last 3-4 years, the Ratio is increasing continuously which should be the real cause of concern for the NTC.

The Straight Line Trend fitted on the basis of least square method shows a long run positive growth rate of 4.6% per year for this ratio. If this ratio is to move as per the fitted Trend Line in future, it can be expected that the cost of operation of NTC should increase slowly but surely.

4.3.4.4 Return on Assets Ratio (ROA)

Here the profitability is measured in terms of profit and the assets. The ROA is also called return on investment (ROI). The conventional approach of calculating ROA/ROI is to divide NPAT by investment/assets. Assets represent pool of funds supplied by shareholders and lenders, while NPAT represents residue income of the owners. Therefore, it is conceptually unsound to use NPAT in the calculation of ROA. Secondly, NPAT is affected by the capital structure. It is, therefore, more appropriate to use the following formula to compute the ROA/ROI.

$$\text{Return on Assets} = (\text{NPAT} + \text{Interests after tax}) / \text{Total assets}$$

$$\text{NPAT} = \text{Net profit after tax}$$

Table 4.26
Calculation of Return on Assets Ratio

(Rs. in thousands)

Fiscal Year	NPAT	Interest AT	NPAT Plus Interest AT	Total Assets	ROA	Straight Line Trend
2004/05	22,81,997	1,05,089.77	22,99,306.77	2,15,84,396	0.107	0.1032
2005/06	24,67,930	26,747.98	23,53,276.98	2,51,15,657	0.094	0.1021
2006/07	30,87,782	12,063.87	31,49,287.87	2,97,24,632	0.106	0.101
2007/08	32,90,117	2,195.00	32,92,312.00	3,30,80,441	0.099	0.0999
2008/09	35,42,461	501.00	35,42,461.00	3,54,30,582	0.099	0.0988
Average of Return on Assets					0.101	

Source: Audited Financial Reports of NTC

Straight Line Trend of the Ratio is: $= 0.1043 - 0.0011 (X)$

When $X=6$, $=0.0977$ {i.e. Expected ROA Ratio for next year (year=6)}

Where, Y = estimate of the Return on Assets Ratio

X = measure of time when base year 2004/05 = 1

The table 4.26 shows that the average ROA of NTC for the study period is 10.0%. The ratio seems to be almost stable as it ranges from 10.7% in F/Y 2004/05 to 9.9% in F/Y 2007/08 AD. But the real problem is that the actual trend of this ratio is showing

downward movement particularly in the most recent years. The average ratio of 10.0% indicates that each 100 rupees of investment in assets is generating a profit of Rs. 10.

The Straight Line Trend fitted on the basis of least square method shows a long run negligible negative growth rate 0.0011 % per year for this ratio. If this ratio is to move as per the fitted Trend Line in future, it can be expected that the total assets return level of the company should further decline, albeit slowly, in the coming years. Continuous expansion of its assets over the recent years followed by marginal increase/decrease net profit of the organization over the most recent years has primarily caused the ROA to take this downward trend.

4.3.4.5 Return on Capital Employed (ROCE)

The relationship between the after tax return earned by both equity holder and lender indicates the efficiency of management for capital utilization. Here the profits are related to capital employed. The funds employed in net assets or the funds financed by permanent sources are known as capital employed. This Ratio shows effectiveness of management in generating profit by the utilization of available capital. Higher the ratio, the more efficient is the use of capital employed.

$$\text{ROCE} = (\text{NPAT} + \text{after tax Interests on long-term debt}) / \text{Capital Employed}$$

Table 4.27
Calculation of Return on Capital Employed Ratio

(Rs. in thousands)

Fiscal Year	NPAT	Interest AT	NPAT Plus Interest AT	Capital Employed	ROCE	Straight Line Trend
2004/05	22,81,997	1,05,089.77	22,99,306.77	1,57,26,288	0.146	0.1408
2005/06	24,67,930	26,747.98	23,53,276.98	1,70,61,238	0.138	0.1481
2006/07	30,87,782	12,063.87	31,49,287.87	1,95,87,285	0.161	0.1554
2007/08	32,90,117	2,195.00	32,92,312.00	2,04,50,725	0.161	0.1627
2008/09	35,42,461	501.00	35,42,461.00	2,07,07,904	0.171	0.17
Average of Return on Capital Employed					0.1554	

Source: Audited Financial Reports of NTC

Straight Line Trend of the Ratio is: $Y = 0.1335 + 0.0073(X)$

When $X=6$, $Y = 0.1773$ {i.e. Expected ROCE Ratio for next year (year=6)}

Where, Y = estimate of the ROCE Ratio

X = measure of time when base year 2004/05 = 1

The table 4.27 shows that the average ROCE of NTC for the study period is 15.54% as in the case with ROA, this is good if we compare this return with the cost of debt. But the past trend of this ratio does not show any clear downward trend as it is the case with ROA. Therefore, it can be said that the return to the long term stakeholders are better than the return earned by its assets assuming that cost of the short-term sources are negligible. The average ratio of 15.54% indicates that each rupee of long term fund employed by the organization is generating after tax profit of 15.54 paisa. The Straight Line Trend fitted on the basis of least square method shows a long run negligible positive growth rate 0.0073 % per year for this ratio. If this ratio is to move as per the fitted Trend Line in future, it can be expected that the return level of the long term capital employed by the company should increase marginally in coming years.

4.3.4.6 Return on Equity (ROE)

The Return on Shareholders' Equity (ROSE) {or simply Return on Equity (ROE)} indicates how well the company's management is able to provide return to its owners. The return on common stock is not fixed. The residue of the earnings, on which the shareholders have claim, may be distributed to them or retained in the business. Nevertheless, the net profit after taxes represents their return. The shareholders' equity includes the total of equity capital, reserve & surplus minus deferred expenditure. ROE is regarded as an important measure because it reflects the productivity of shareholders' capitals, as well as the operational efficiency of management.

$$\text{Return on Equity (ROE)} = \text{Net Profit after Tax (NPAT)} / \text{Net Worth}$$

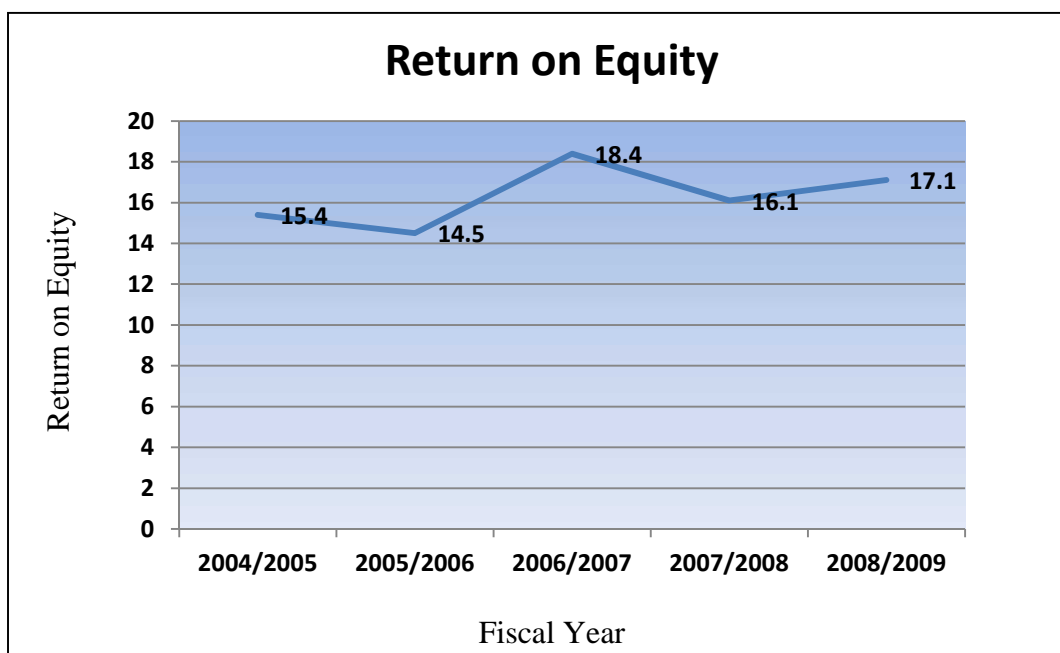
Table 4.28
Calculation of Return on Equity Ratio

(Rs. in thousands)

Fiscal Year	NPAT	Net Worth	ROE	Straight Line Trend
2004/05	22,81,997	1,47,73,937	0.154	0.153
2005/06	24,67,930	1,69,27,414	0.145	0.158
2006/07	30,87,782	1,67,61,248	0.184	0.163
2007/08	32,90,117	2,04,39,476	0.161	0.168
2008/09	35,42,461	2,06,83,665	0.171	0.173
Average of Return on Equity (ROE) Ratio			0.163	

Source: Audited Financial Reports of NTC

Figure 4.13
Return on Equity of NTC



Straight Line Trend of the Ratio is: $= 0.148 + 0.005 (X)$

When $X=6$, $= 0.178$ {i.e. Expected ROE Ratio for next year (year=6)}

Where, Y = estimate of the Return on Equity Ratio

X = measure of time when base year 2004/05 = 1

The table 4.28 shows the ROE of NTC for past 5 years. The average Ratio for the 5-year period is around 16.3% which indicates that the equity holders of NTC earned 16.3 paisa of return on their investment of Re. 1.00 over the last 5 years, on average. It is obvious from the table that after the initial 2 years of the study period the average ROE for the final of the 3 years has been satisfactory movement toward positive. NTC has to take measures to make the Ratio more stable in future which will increase the confidence of the owners.

The Straight Line Trend fitted on the basis of least square method shows a long run negative growth rate of 0.5% per year for this ratio. If this ratio is to move as per the fitted Trend Line in future, it can be expected that the equity holders' return would further go slightly upward from its current level.

4.4 Statistical Analysis

4.4.1 Correlation and Regression Analysis

Correlation analysis intends to measure the relationship between two variables. This analysis describes not only the magnitude of relationship but also its direction. Regression analysis intends to use the relationship between the known variables and the unknown variables to estimate and predict the values of unknown one. Correlation & Regression analysis of Gross Domestic Product (GDP) and Sales Revenue; Investment (Total Asset) and Profit; Sales Revenue and Cost; Investment (Total Asset) and Sales Revenue are presented in this study.

4.4.1.1 Correlation & Regression Analysis of Gross Domestic Product (GDP) and Sales Revenue

The relationship between Gross Domestic Product (GDP) and Sales Revenue is measured and tested by Karl Pearson's Co-efficient of Correlation. A positive correlation here would imply that the company maintains a stable growth in its revenue with the growth in the economy as a whole. Insignificant or negative value would point out the weakness of management to expand and grow the organization in the tune of the economic growth. The Regression Equation would develop a function, using which, we can predict what the likely Sales Revenue will be in the coming years with a given GDP estimates. The calculation of this Correlation and Regression Equation is shown as follows:

Summary of Computations

$$r = 0.987042$$

$$PE = 0.007767$$

$$|r| > PE$$

$$|r| > 6 \times PE \ \& \ |r| > 0.5$$

The value of r is found to be 0.99 which means that there exists a high degree of positive Correlation between GDP and Sales Volume i.e. the two variables increase/decrease strongly in the same direction. The value of r is far greater than 6 times the probable error, which means that there is clear evidence of significant association between these two variables. The computed value of r indicates a cause and effect relationship.

The calculations of the regression co-efficient are given by

$$= -48.76 + 0.02804*(X)$$

The value of b is found to be 0.02804, which means, 1 unit change in GDP would result in 0.02804 unit change in the Sales Revenue of NTC.

4.4.1.2 Correlation & Regression Analysis of Investments and Profit

The relationship between Investment and Profit is measured and tested by Karl Pearson's Co-efficient of Correlation. A positive correlation here would imply that the corporation maintains a stable growth (or decline) in its Profit in line with its Investment increase (or decrease). Insignificant or negative value would point out the weakness of management to keep the Profit in line with the Investments i.e. it points to the fact that the Corporation's expansion may not be giving desirable results. The Regression Equation would develop a function using which we can predict what the size of profit would be in the coming years with a planned additional investment in assets. The calculation of this Correlation and Regression Equation is shown as follows:

Summary of Computations

$$r = 0.9912296$$

$$PE = 0.005267$$

$$|r| > PE$$

$$|r| > 6 \times PE \ \& \ |r| > 0.5$$

The value of r is found to be 0.99, which implies that there exists a high degree of positive Correlation between Total Investments and Total Profit. This means the two variables move in the same direction; i.e. if Total Investment increases then Total Profit also increase and vice-versa. The value of r is greater than 6 times the probable error and higher than +0.5; means that there is significant degree of positive Correlation between the variables i.e. the value of r is significant. Hence, the relationship between Total Investments and Total Profit is that of a cause and affect one.

Hence the regression equation of Profits (Y) on Investments (X) is given by

$$= 2.0127 + 0.094274 * (X)$$

The value of b is found to be 0.094274, which means that, on average, 1 unit change in Total Investment (Asset) would result in 0.094274 unit change in the Net Profit of NTC. Given the capital budget plan of the NTC for coming years, we can use the above Equation to estimate what the profit of the NTC would likely to be in the coming years.

4.4.1.3 Correlation & Regression Analysis of Sales Revenue and Cost

The relationship between Sales Revenue and Cost is measured and tested by Karl Pearson's Co-efficient of Correlation. A positive Correlation here would imply that most of the Costs of NTC are of variable nature. A low positive Correlation would imply that the average Cost would go down as the volume expands. A negative Correlation, which is highly unlikely, would point out that Cost of NTC decreases with the increase in Sales Volume and vice versa. The Regression Equation would develop a function, with the help of which, we can predict what the amount of Cost would be in the coming years with various predicted Sales Levels. The calculation of this Correlation and Regression Equation is shown as follows:

Summary of Computations

$$r = 0.994495921$$

$$PE = 0.00331$$

$$|r| > PE$$

$$|r| > 6 \times PE \ \& \ |r| > 0.5$$

The value of r is found to be 0.99, which implies that there exists a high degree of positive Correlation between Sales Revenue and Cost. This means the two variables move in the same direction; i.e. if Sales Revenue increases then Cost also increases, and vice-versa. The value of r is greater than 6 times the probable error and higher than +0.5; means that there is significant degree of positive Correlation between the variables i.e. the value of r is significant.

Hence the regression equation of Costs (Y) on Sales (X) is given by

$$= 7185.10 + 0.09679 \times (X)$$

The value of b is found to be 0.09679, which means that, on average, 1 unit change in sales revenue would result in 0.094274 unit change in the total cost of NTC. Given the capital budget plan of the NTC for coming years, we can use the above Equation to estimate what the profit of the NTC would likely to be in the coming years.

4.5 Major Findings of the Study:

The major findings of the study are as follows:

-) Nepal Telecom is not being able to achieve the sales target because the data of the study period shows that the budgeted sales is always higher than the actual sales.
-) The actual collection of Nepal Telecom is in increasing trend throughout the study period but actual collection is lesser than the budgeted collection, which shows inefficiency of the management in collecting the dues.
-) The revenue from Mobile Service & CDMA service is growing during the study period but the revenue of General Telephone is decreased in the fifth year. So the management should think to increase the usage of General Telephone in coming year.

-) The total revenue after adjustment is in increasing trend so it can be assumed increasing for the coming period.
-) About 90% of the revenue is generated from Mobile Service (45.39%) & General Telephone (43.18%) so increment in the revenue of these products may play a major role for the increment of the profitability of the organization.
-) The total revenue of Nepal Telecom for last 5 year is increasing, but the revenue from General Telephone is decreased in fifth year. So the company should give emphasis on promoting the General Telephone.
-) The revenue collection pattern of Nepal Telecom is in increasing trend throughout the study period & the NPAT is increasing every year. So the profit of the company can be estimated growing for next year.
-) The actual cost is always higher than the budgeted cost except in FY 2007/08. The higher actual cost than the budgeted cost shows the inefficiency of the NTC management in regard of controlling the cost.
-) Contribution margin on sales is in decreasing trend during the study period. With the help of this 5 year trend, it can be assumed decreasing for the future period.
-) The overall short-term solvency position of NTC is satisfactory. Perhaps, because of the service nature of its operation, NTC has maintained low level of inventory compared with other current assets components. Hence, the difference between Current Ratio and Quick Ratio is negligible.
-) The average age of Inventory is showing decreasing tendency over time, particularly for the last four years, the decreasing value is a good indication for NTC.
-) Average collection period for the study period is 128 days which is fluctuating every year which shows the management inefficient in collecting the dues.
-) Overall, the assets utilization position of NTC is termed poor as well as deteriorating over the five years of study period.
-) NTC has kept the policy of increasing its debt financing proportion gradually over the study period. Overall debt financing proportion increase approximately 1:3 to 1:2 of the total assets. The amount of long-term debt used by NTC has been increasing.

-) The relation between the investment and profit indicates the profitability on investment. High and significant correlation between investment and profit points to the fact that additional investment, on aggregate; by rupee 1 will lead to increase in profit by just 10 paisa. So, a typical investment project, NTC is expected to initiate, can expect to earn around 10% Return on Investment, approximately equal to the 5 years average ROI. The relationship between sales revenue and cost indicate the profitability on volume.
-) Better solvency position, short-term as well as long-term, is good and the direction of the ratios which indicate these positions is positive particularly from the viewpoint of the lenders. But when it comes to resource employment position, it can be safely said that the turnovers generated by the assets are not satisfactory.
-) The ROE of the company is fluctuating & it can be expected that the equity holders' return would further go slightly upward from its current level.
-) There exists a high degree of positive Correlation between Total Investments and Total Profit. This means the two variables move in the same direction; i.e. if Total Investment increases then Total Profit also increase and vice-versa.
-) There exists a high degree of positive Correlation between Sales Revenue and Cost. This means the two variables move in the same direction; i.e. if Sales Revenue increases then Cost also increases, and vice-versa.
-) The higher degree of correlation between GDP and sales points out to the fact that the revenue of NTC is going to be up as the nation become more and more affluent. This rate of change in volume as shown by the Regression Coefficient 'b' is approximately 3 paisa per rupee of GDP increased.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Nepal mainly consists of two sorts of business enterprises which are actively contributing for the economic growth. The two types of business enterprises are namely public enterprises and private enterprises. Public enterprises are government owned business organizations established with the objectives of providing public service and setting up infrastructure of development. On the other hand private enterprises are established with the primary motive of profit generation at the same time contributing of the national economic development. Hence both enterprises play the vital role for the overall development of the nation by mutual effort.

Telecommunication is an inevitable infrastructure of development to all countries. It is considered as prerequisite for the other dimension of development. In Nepal the need of telecommunication services are primarily fulfilled by Nepal Telecom. History of telecommunication service in Nepal is not so long. First telecommunication service in the country is introduced in 1974 BS which was called Magneto Telephone. Since then and up to the lurching of first five year plan of 2012 BS, the development of telecommunication was in slow pace. After Nepal started systematic economic development by launching its first five year plan in 2012BS, various national and international trunk lines were added and cross bar telephone lines to people and public offices were distributed.

Introduction of liberalized economic policy in Nepal gradually facilitated the private sector investment as a result multinational companies also showed their presence. Further more public enterprises started to be privatized. Such trend couldn't also remain intact without influencing Nepal Telecommunications Corporation. Hence Nepal Telecommunications Corporation has been changed to Nepal Doorsanchar Company Limited in 2061 BS under the company act. It's popularly known commercial name is "Nepal Telecom". Although Nepal Telecom has been recently established under the company act its 100% ownership had been held by Nepal Government by receiving the entire investment from government & it is in the process of selling its equity to the public.

As financial health is the key indicator of the success and failure of the organization. Different financial indicator show to what extent would the organization is capable to meet the expectations of various stakeholders of the company. In the light of this main issue of the study is to evaluate the profit planning of Nepal Telecom on the basis of latest available information. It will light upon the past financial strength and weaknesses faced by the organization and provide the guidelines to improve the financial health. Financial Analysis and planning function is not a decision- making in itself rather it is an ancillary service which helps in planning for those two decisions and evaluating the outcome of those two decisions and recommending necessary rectifying measures.

To make the study significant, ratio analysis and regression analysis, income and expense analysis, correlation analysis and regression analysis have been carried out regarding the major variables of NTC. Before the analysis of such financial and statistical tools the details of the same has been explained in the chapter namely literature review and for the mathematical calculations research methodology has been carried out. On basis of the analysis we will conclude our findings and try to provide some relevant recommendations to the management of NTC so that they can apply those recommendations if they deem appropriate.

5.2 Conclusions

This study is carried out as academic requirements for MBS degree on the topic of “A study on profit & revenue planning of Nepal Telecom Limited.” The study was started with the objective to examine the comprehensive revenue planning mechanism applied by NTC. Based on the analysis and interpretation of the data, finding of the study, the conclusions have been listed below in order to have a glimpse of profit planning of the NTC.

-) Nepal Telecom is not being able to achieve the sales target during the study period.
-) The revenue of Nepal Telecom is in increasing trend throughout the study period & the NPAT is increasing every year.
-) The total revenue of the company is increasing but revenue from General Telephone is decreasing in fifth year. The revenue can be assumed increasing for the coming period.

-) General Telephone (43.18%) & Mobile Service (45.39%) occupy nearly 90% of the total revenue of Nepal Telecom.
-) The NPAT of the company is increasing every year. So the profit of the company can be estimated growing for next year.
-) The higher actual cost than the budgeted cost shows the inefficiency of the NTC management in regard of controlling the cost.
-) Contribution margin on sales is in decreasing trend so it can be assumed decreasing for the future period.
-) Average collection period of the company is 128 days which shows the management inefficient in collecting the dues because the average collection period of the industry is less than two months.
-) Overall, the assets utilization position of NTC is termed poor as well as deteriorating over the five years of study period.
-) NTC has kept the policy of increasing its debt financing proportion gradually over the study period. The amount of long-term debt used by NTC has been increasing.
-) NTC is expected to earn around 10% Return on Investment.
-) The turnovers generated by the assets are not satisfactory.
-) The ROE of the company is fluctuating throughout the study period.
-) There exists a high degree of positive Correlation between Total Investments and Total Profit.
-) There exists a high degree of positive Correlation between Sales Revenue and Cost.

5.3 Recommendations

Based on analysis and findings of the study the following recommendations can be made as suggestions to improve its profitability addressed by this study.

-) Nepal Telecom is not being able to achieve the sales target similarly the higher actual cost than the budgeted cost shows the inefficiency of the NTC management in regard of controlling the cost. So the management should plan for the achievement of the budget.

-) The revenue from Mobile Service & CDMA service is growing during the study period but the revenue of General Telephone is decreased in the fifth year. So the management should think to increase the usage of General Telephone in coming year.
-) Contribution margin on sales is in decreasing trend during the study period. So, the management should plan for the retention of contribution margin.
-) ACP of NTC is very poor despite some improvement in recent years. On average, it takes the organization more than 5 months to collect a typical account, so the collection effort needed to be intensified so that ACP can be reduced to more manageable level.
-) The company is losing the benefit of the leverage over time, particularly in the most recent years. A profitable company like NTC should not hesitate to use the cheaper debt source to magnify the Return of Equity. So, the management should consider using long-term debt when financing new expansion projects in the future.
-) It seems that the working capital is not managed properly in generating sales volume. The excess investment in working capital is not properly utilized. So NTC can think of reducing its current assets components and/or increasing costless short-term financing (if available) if it cannot sufficiently increase its sales volume in near future.

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APPENDIX - 1

Computation of Correlation & Regression Co-efficient from variables GDP & Sales Revenue

(Rs. in ten millions)

Fiscal Year	GDP Rs (X)	Sales Rs (Y)	X ²	Y ²	XY
2004/05	3940.52	59.28648	15527697.87	3514.886711	233619.5602
2005/06	4061.38	65.55992	16494807.5	4298.10311	266263.7479
2006/07	4375.46	76.69283	19144650.21	5881.790173	335566.41
2007/08	4749.19	85.59283	22554805.66	7326.132547	406496.6123
2008/09	5086.51	91.94297	25872583.98	8453.509732	467668.8363
	22213.06	379.075	99594545.22	29474.4223	1709615.167

Source: Audited financial Reports of NTC & economic survey F/Y 066/067 BS, Ministry of Finance

Now, the Karl Pearson's co-efficient of correlation(r) is given by

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

$$r = \frac{5 * 1709615.167 - 22213.06 * 379.075}{\sqrt{[5 * 99594545.22 - (22213.06)^2] * [5 * 29474.4223 - (379.075)^2]}}$$

$$r = 0.987042$$

Calculation of Probable error,

$$PE = \frac{0.6745(1-r^2)}{N}$$

$$PE = \frac{0.6745[1-.974252]}{5}$$

$$PE = 0.007767$$

Summary of Computations

$$r = 0.987042$$

$$PE = 0.007767$$

$$|r| > PE$$

$$|r| > 6 \times PE \text{ \& } |r| > 0.5$$

The calculations of the regression co-efficient are given by

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - (\sum X)^2}$$

$$b = \frac{5 * 1709615.167 - 22213.06 * 379.075}{5 * 99594545.22 - (22213.06)^2}$$
$$b = 0.02804$$

$$a = \frac{\sum Y}{N} - b * \frac{\sum X}{N}$$

$$a = \frac{379.075}{5} - 0.02804 * \frac{22213.06}{5}$$

$$a = 75.815 - 124.571$$

$$a = -48.76$$

Hence the regression equation of Sales (Y) on GDP (X) is given by

$$= -48.76 + 0.02804 * (X)$$

**Computation of Correlation & Regression co-efficient from variables
investment & profit**

(Rs. in Ten million)

Fiscal Year	Investment (X)	Profit (Y)	X²	Y²	XY
2004/05	215.84396	22.81997	46588.6151	520.751031	4925.55269
2005/06	251.15657	24.6793	63079.6227	609.067848	6198.36834
2006/07	297.24632	30.87782	88355.3748	953.439768	9178.31836
2007/08	330.80441	32.90117	109431.558	1082.48699	10883.8521
2008/09	354.30582	35.42461	125532.614	1254.90299	12551.1455
	1449.3571	146.70287	432987.784	4420.64863	43737.237

Source: Audited financial Reports of NTC

Now, the Karl Pearson's co-efficient of correlation(r) is given by

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

$$r = \frac{5 * 43737.237 - 1449.3571 * 146.70287}{\sqrt{[5 * 432987.784 - (1449.3571)^2] * [5 * 4420.64863 - (146.70287)^2]}}$$

$$r = 0.9912296$$

Calculation of Probable error,

$$PE = \frac{0.6745(1-r^2)}{N}$$

$$PE = \frac{0.6745[1-.98254]}{5}$$

$$PE = 0.005267$$

Summary of Computations

$$r = 0.9912296$$

$$PE = 0.005267$$

$$|r| > PE$$

$$|r| > 6 \times PE \ \& \ |r| > 0.5$$

The calculations of the regression co-efficient are given by:

$$b = \frac{N \sum XY - \sum X \sum Y}{[N \sum X^2 - (\sum X)^2]}$$

$$b = \frac{5 * 43737.237 - 1449.3571 * 146.70287}{5 * 432987.784 - (1449.3571)^2}$$

$$b = 0.094274$$

$$a = \frac{\sum Y}{N} - b * \frac{\sum X}{N}$$

$$a = \frac{146.70287}{5} - 0.094274 * \frac{1449.3571}{5}$$

$$a = 2.0127$$

Hence the regression equation of Profits (Y) on Investments (X) is given by

$$= 2.0127 + 0.094274 * (X)$$

Computation of Correlation & Regression co - efficient from variables sales revenue & total cost

(Rs. in Ten million)

Fiscal Year	Total Sales Revenue (X)	Total Costs (Y)	X ²	Y ²	XY
2004/05	5928.648	3646.651	35148867.11	13298063.52	21619710.16
2005/06	6555.992	4088.062	42981031.1	16712250.92	26801301.77
2006/07	7669.283	4581.502	58817901.73	20990160.58	35136835.4
2007/08	8855.034	5564.917	78411627.14	30968301.22	49277529.24
2008/09	9194.297	5651.836	84535097.32	31943250.17	21619710.16
	38203.254	23532.968	299894524.4	113912026.4	154455086.7

Source: Audited Financial Reports of NTC

Now, the Karl Pearson's co-efficient of correlation(r) is given by

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

$$r = \frac{5 * 154455086.7 - 38203.254 * 23532.968}{\sqrt{[5 * 299894524.4 - (38203.254)^2 * 5 * 113912026.4 - (23532.968)^2]}}$$

$$r = 0.994495921$$

Calculation of Probable error,

$$PE = \frac{0.6745(1-r^2)}{\sqrt{N}}$$

$$PE = \frac{0.6745[1-0.989022]}{\sqrt{5}}$$

$$PE = 0.00331$$

SUMMARY OF COMPUTATIONS

$$r = 0.994495921$$

$$PE = 0.00331$$

$$|r| > PE$$

$$|r| > 6 \times PE \text{ \& } |r| > 0.5$$

The calculations of the regression co-efficient are given by:

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - (\sum X)^2}$$

$$b = \frac{5 * 154455086.7 - 38203.254 * 23532.968}{5 * 299894524.4 - (38203.254)^2}$$

$$b = 0.09679$$

$$a = \frac{\sum Y}{N} - b \times \frac{\sum X}{N}$$

$$a = \frac{38203.254}{5} + 0.09679 * \frac{23532.968}{5}$$

$$a = 7185.10$$

Hence the regression equation of Costs (Y) on Sales (X) is given by
 $= 7185.10 + 0.09679 * (X)$