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MANAGEMENT USE OF ACCOUNTING INFORMATION IN FINANCIAL DECISIONS AND CONTROL OF NATIONALISED INDUSTRIES IN BANGLADESH

A THESIS PRESENTED IN FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
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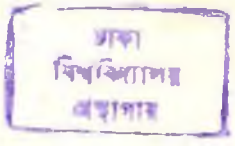

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ABSTRACT

After the emergence of Bangladesh, it is seen that productivity and profitability of the nationalised industries had not been satisfactory upto the desired level due among others to management's inability, particularly its failure to use adequately accounting information in financial decisions and control. Since accounting information today is treated as the cornerstone for all decisions in developed countries, the study of the use by management of accounting information in its decisions and control of financial matters in Bangladesh nationalised industries is important. This research is about management use of accounting information in financial decisions and control of nationalised industries in Bangladesh. The main objectives of this study are: (i) to make a critical assessment of industrial development with management pattern and accounting system in the selected industries, (ii) to make an evaluation of the practice and extent of use of accounting information in major financial decisions and control in the selected nationalised industries identifying the problems and difficulties encountered in the way of such use, (iii) to examine the system for management information, financial reporting and feedback and (iv) finally, to assess the impact of presence or otherwise of the use of accounting information in financial decisions and control on financial performances to be seen through the profitability of the identified nationalised industries in Bangladesh.

The financial decisions and control areas which have been identified for the purpose of this study include (1) capital expenditure decisions and control, (2) working capital decisions and control, and (3) profit decisions and control.

Investigations were conducted in 245 enterprises under B.J.M.C., B.T.M.C., B.S.F.I.C., B.S.E.C. and B.C.I.C. Of them, 10 percent enterprise heads and corporation chiefs, accounts and finance chiefs, planning and development chiefs and Management Information System chiefs were interviewed through questionnaire which were designed mostly on Likert's five-point scale. In framing the questionnaire, due consideration was given to reliability and validity of the measurement instruments. These included a pilot study, consultation of past research studies, expert opinion and pre-testing.

The study has been designed on the hypothesis that the managerial use of accounting information in various determinants or areas of financial decisions and control is low and inadequate and the use of accounting information in financial decisions has positive impact on the financial performances i.e. profitability. The statistical evidence supports the hypothesis and indicates that management's low dependence on accounting information as main decision input for the identified financial decision areas results in an unfavourable impact on the profitability of the selected industries. The study also reveals several problems encountered at management level in using accounting information in financial decisions of the industries concerned. Following is the brief summary of the findings of the study:

(1) A brief review of industrial development reveals that the role of nationalised industries had greatly increased in the industrial development of the country with radical change in ownership and industrial policy since Promulgation of Bangladesh Industrial Enterprises (Nationalization) Order, 1972. It is also revealed from the analysis

of management pattern of the selected industries that there was no clear-cut delineation of powers and responsibilities in the three tier management system followed by absence of adequate freedom for making decisions on various financial aspects and control thereof, and absence of any appropriate criterion for performance measurement as well. It is further disclosed that the existing accounting system was viewed more as the system for recording and reporting business operations of the industries instead of as an information system for management decision-making.

(2) The use of accounting information in capital expenditure decisions and control was found inadequate in nationalised industries and it was observed that managerial decisions about (i) capital expenditure requirements, (ii) the structural components of capital and (iii) financing pattern of capital expenditure as well as (iv) managerial control practices such as (a) budgetary control and (b) treasury control for capital expenditure—all were taken mostly on the basis of intuition and/or some non-accounting data, that is, economic data, Government statistics, marketing information and others rather than on the basis of the accounting information i.e., financial statements information, actual costs of similar and existing projects, etc. This was due to some problems attached with capital expenditure decisions such as lack of proper feasibility studies of the New Projects or Balancing, Modernization and Replacement (BMR) or Expansion programme for want of accurate financial statements information, actual costs and technical data, inaccurate financial and economic project analysis, etc. In the case of capital expenditure control it was also observed that there was no provision for post audit and proper analysis of actual

capital expenditure elements incurred as well as non-practice of performance budgeting for the purpose. Further, due to high debt-equity ratio, the costs paid for borrowed capital were found high and consequently the variances between actual capital expenditure and revised budgeted capital expenditure of New Projects, BMR and Expansion programme were adverse. All these identified problems and low use of accounting data in capital expenditure decisions and control affected ultimately the financial performances of the identified industries.

Likemanner, the use of accounting information in working capital decisions and control on the whole was low or insufficient in the selected industries. The main reason as revealed for this was that the managerial decisions regarding (i) working capital requirements, (ii) inventory, (iii) accounts receivables, (iv) cash, (v) working capital financing and (vi) managerial control of working capital elements - all were done without adequate use of accounting information by the management and were based mostly on non-accounting information, intuition and hunches of the planners. The inventory and credit and collection decisions were found to be unsound in terms of absolute figures as well as in terms of "Number of Months' Value of Production" and "Average Collection Period" respectively. So was the position about the cash decision where the cash forecastings were found inaccurate and the cash receipt and disbursement policies were improper and so on. Working capital financing decision too was defective and the dependence on external or institutional sources of finance was found to be excessive. In the area of working capital control function, it was observed that standard costing, variance

analysis and cost control technique were not properly practised and annual revenue budgets were prepared without proper consideration and use of past records, accounting figures and information.

(4) The use of the accounting information in various aspects of profit decisions and control areas, viz. (i) deciding sales target and selling price, (ii) cost of production, (iii) operating overheads and (iv) profit targets - was also found to be scanty. The reasons for this were poor profit plans and budgets, absence of proper sales forecasting, the non-use of break-even analysis, standard costing, proper operating statements and revenue budgets, etc. Profit target estimates too were unsound and it was observed that these were taken without due consultations with the accounts personnel and financial executives who were directly connected with the preparation and presentation of the financial statements and related reports. The identified reasons and low use of accounting information in profit decisions resulted in an adverse variance between budgeted and actual figures for sales and selling price, production cost, operating expenses and profit thus affecting the very profitability of the industries concerned.

(5) Further, the management information and financial reporting system as practised in the identified industries was found to be inappropriate and ineffective for management use of accounting information in financial decisions and control areas on account of its poor organisation and functionaries, lack of scientific communication of all accounting information, lack of objectivity, low reliability and cosmetisation of data, ineffective and inoperative feedback

of accounting information, indetermination of responsibility centres, poor variance analysis, lack of trained personnel and computer service, lack of proper knowledge and coordination among various related departments.

(6) The extent of use of accounting and non-accounting information both at corporation and enterprise levels had been analysed through Chi-square test of the opinions of the samples. As regards the use of accounting information, there were fourteen identified determinants or areas of financial decisions and control function, those being termed here as independent variables, viz., capital expenditure requirements decision, capital structure decision, capital expenditure financing decision, capital expenditure control, working capital requirements decision, inventory decision, accounts receivable decision, cash decision, working capital financing decision, working capital control, sales target and sale price decision, production cost decision, operating overheads decision and profit target decision. It was observed that the opinion variation as regards the extent of use of accounting information in these above variables was independent of the variations in the levels of use (both at corporation and enterprise). But there was no significant relationship between the extent of use and the levels of use (not significant at .05 level) in the case of all the fourteen independent variables except in capital expenditure financing decision and cash decision, where there was significant relationship between the extent of use and the levels of such use.

(7) Further, the nature of overall impact of using accounting information on the financial performances as seen through profitability of the selected industries was also measured through the indicator of Karl Pearson's Coefficient of Correlation (r) between each of the independent variables as identified in the proceeding paras and each of the three dependent variables termed here as profitability measures, viz., Return on Sales (ROS), Return on Capital (ROC) employed and Return on Investment (ROI). Out of forty two coefficients of correlation between the extent of use accounting information in financial decisions and profitability, thirty one values of correlation coefficients were positive while remaining eleven were negative. It is observed that there was positive relationship between the use of accounting information in identified determinants of financial decisions and control function and the profitability measures or indices. In fine, it is concluded that the use of accounting information in financial decisions and control areas had positive impact on the profitability of the industries under study.

As such, since the extent of use of accounting information in the identified financial decisions and control variables on the whole was found low and inadequate resulting in unfavourable impact on the financial performances, such position necessitates high and more effective use by management of accounting information in various aspects of financial decisions and control so as to improve in the long run, the level of financial performances of the nationalised industries under study.

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CHAPTER - 1

INTRODUCTION

1.1 Background

The principal objective of every business and industrial enterprise irrespective of the system of economy is maximization of profits and wealth.[1] The role of appropriate managerial decisions in the realization of this objective is most significant and crucial. In the dynamic world of industrial management, a manager is confronted with the necessity to take certain decisions. Managerial decisions encompass a very complex procedure in today's economic and business fields which take place in a probabilistic world and at the same time which are operating in the changing socio-eco-political situations. D.C. Haque[2] brilliantly summed up the managerial process as consisting of combining men, machines, materials and money in such a way as to achieve predefined goals of business such as profit and wealth maximization. At the same time, it was pointed out that the success of such managerial process and decisions depends to a great extent, on the depth and magnitude of applying the art and technique in using such accounting information which is a foggy art requiring

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[1] DECOSTER, DON T. and SCHAFER, ELDON L., Management Accounting: A Decision Emphasis. John Wiley and Sons, Inc., New York, 1976, p.20.

[2] HAGUE, D.C., Managerial Economics. Longman, London, 1969, p.20.

clairvoyance, experience and sense of proportion.[3] But quite often the management does not possess any comprehensive and risk free information required to make a decision. Nor does it have any summary knowledge of the consequences of all the decisions. Under the circumstances, in order to achieve the goals of the enterprise, managerial decisions need to be taken by considering different bases and premises, viz., past experiences, hunches or guess works, intuitions, factual data or historical accounting information. Among these bases, accounting information is very important and widely used as inputs for managerial decisions in business and economic fields.

Decisions are sine-qua-non for any organization either commercial or industrial or economic.[4] It is the heart and soul of managerial functions of any enterprise. In its simple usage, decision means coming to a conclusion. "It presupposes previous consideration of a matter causing doubt, wavering, debate or controversy and implies arriving at a more or less logical conclusion that brings about debate to an end".[5] Further, Tannenbaum defines decision as a conscious choice or selection from among a group of two or more behaviour alternatives on the basis of some

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[3] BARLEV, BENZION and LEVY, HAIM , "The Information Content of Accounting Data and the Management of Port Folios", Journal of Business Finance and Accounting, Vol. 8, No.2, 1981, p.221.

[4] SIMON, H.A., The New Science of Management Decision, Harper & Row, Publishers, Inc., New York, 1960, and RICHARD, M.D. and GREENLAW, PAUL S., Management Decision-Making, Homewood Illinoise, Richard D., Irwin Inc., 1966.

[5] WEBSTER, Dictionary of Synonyms, Springfield (Mass.), Merriam, 1951, p.5.

factual data.[6] It is thus evident that decision means any deliberate choice for doing or not doing something and it presupposes consideration of some factual information and data as well. It is the process of purposeful selection of one course of action from among a set of alternative courses of action to achieve some objectives in the future. The measure of the output or value of a decision refers to the extent to which that decision increases organizational goal achievement when it is used by the operating units.[7]

However, there are different ways of making decision. Managerial business decisions may be taken (i) by draw of lot, (ii) by relating to some immediate happening, i.e., chance basis, (iii) by guesses in respect of economic forces, (iv) by intuition, and finally, (v) by consideration and intelligent interpretation of some factual data and information or significant factors. But where "intuition" is used as a basis for decision, it is also based upon consideration, of course, at subconscious level, of a great number of significant factors. "These factors may include such as the movement of stock prices, the impression that business is declining because there has been an increase in the number of clearance sales or number of firms going out of business, or an impression of public reaction to new events or an interpretation through personal experience and observation of the probable

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6 TANNENBAUM, ROBERT, "Managerial Decision Making", Journal of Business, Vol. XXIII, No.1, January, 1950.

7 YOUG, STANLEY, Management : A Systems Analysis, Scott, Foresman and Company, Glenview, Illinoise, 1966, p.7.

effects on market conditions, etc."[8] Thus, it is realized that decision is not fully based on pure intuition but rather upon the subjective evaluation of multitudinous impressions and the intuition will not be used successfully if the subconscious evaluation is present in decision making.[9] But when a business decision is taken intuitively, there are two problems. The first problem is that as new situations arise, there is no basis for predicting what would happen and there is no history to rely on. The second problem is that the success of management cannot be continued and perpetuated over a long period of time. Therefore, intuition may not be taken as a scientific basis for decision,[10] because the essence of management is to establish a rational decision making process that can be analysed, understood, perpetuated and communicated. Hence, accounting must direct the management to past data in order to achieve improved future decisions.[11]

The important and scientific method of taking decision might be the use of intelligent analysis of factual data for the purpose by recognizing the fact that impressions or guesses or intuitions may be misleading or erroneous and personal observations may also

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8 EASTON, EDISON E. and NEWTON, BYRON, L., Analysis of Financial Data, McGraw-Hill Book Company, Inc., New York, 1978, p.271.

9 Ibid., p.272.

10 THACKER, RONALD J. and SMITH, RICHARD L., Modern Management Accounting, Prentice-Hall of India Private Ltd., New Delhi, 1978, p.5.

11 BURN, THOMAS J. (Ed.), The Use of Accounting Data in Decision Making, The Ohio State University, Columbus, Ohio, p.212.

be limited in scope and coverage as discussed earlier. In this method, the decision-maker may also recognize the limitations of his own experiences and may admit the fact that there is a tendency for an individual to examine the cause-and-effect relationship even in situations where scientific observation would reveal no such causal relationships.[12] Thereby, the decision-maker endeavours to rectify his impressions and experiences by using all available factual and past data. The main sources of factual data may be financial or non-financial transactions.[13] It is evident from the above discussion of the bases for taking decisions that the use of factual data, both financial and non-financial, followed by an intelligent interpretation thereof had been accepted as scientific inputs and premises for business decisions. Because of the wide relevance and coverage of such factual data, it is probably safe to say that not very much management decisions, particularly financial decisions, are reached without some reference to accounting information.[14] Since an effective decision accomplishes the goals that management seeks to achieve,[15] accounting information is taken as the scientific bases or inputs for such decisions.

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[12] EASTON, EDISON E. and NEWTON, BYRON L., op. cit., p.273.

[13] Ibid.

[14] THACKER, RONALD J. and SMITH, RICHARD L., op. cit., p.554.

[15] DECOSTER, DON T. and SCHAFER, ELDON L., op. cit., p.6.

Accounting information being the factual data is treated as potential managerial tools for decision.[16] Accounting information is the means to an end, the end being management decisions.[17] The usefulness of accounting information for management decisions and control has been a topic of increasing interest. Accounting information has come to be widely accepted as the important bases for decisions and control in both private and public sector enterprises. The importance of use of accounting information has been recognized by almost all the classical writers. The most celebrated writers are of the opinion that managerial decisions cannot be taken without due consideration of any accounting information. There has been extensive writings of Friend,[18] Blume and Friend,[19]

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16 AMEY, LIOYD R. and EGGINTON, DON A., Management Accounting: A Conceptual Approach, Longman Group Limited, London, 1973, p.11.

17 ANDERSON, DONALD L. and RAUN, DONALD L., Information Analysis in Management Accounting, John Wiley and Sons, Inc., New York, 1978, p.5.

18 FRIEND, I., "Recent Developments in Finance", Journal of Banking and Finance, Vol. 1, No. 2, October 1977.

19 BLUME, E.M. and FRIEND, I., The Changing Role of the Individual Investors, John Wiley & Sons, New York, 1978.

Rahman,[20] Talukdar,[21] and others[22] on the use of accounting information for managerial decisions and control purposes. But the the problem of how accounting information is used is difficult and equally important to research as well. Some attempts have been made in this regard but the quantum of research done is far from adequate. Horngren investigated into this problem in 1955 and Backer was engaged in a large-scale research project on the

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20 RAHMAN, M., "An Empirical Investigation into Management Use of Accounting Information and the Influence of Selected Job Related Traits and Organizational Correlates". Unpublished Ph.D. Thesis, Manchester Business School, Manchester University, April, 1976.

21 TALUKDAR, M.Y., "An Approach to Inflation Accounting in the Context of Developing Economics". Unpublished Ph.D. Thesis. Business School, The City University, London, 1978.

22 BRUNS, WILLIAM J.(JR.), "Accounting Information and Decision Making : Some Behavioural Hypptheses" The Accounting Review, Vol. XLIII, No.3, July, 1968; BERNSTEIN, LEOPOLD A., Financial Analysis : Theory, Application and Interpretation, Richard D. Irwin, Inc., Homewood, Illinois, 1978; TIGGES, K.S., "Use of Accounting Data in Decision Making", Management Services, Vol. III, No.6, November-December, 1966; TURK, IVAN, "Accounting Information Needed in Assessing the Efficiency of the Public Enterprise", Public Enterprise, Vol. 1, No.2, Yugoslavia, 1980; HAMPTON, JOHN J., Financial Decision Making : Concepts, Problems and Cases. Prentice-Hall of India Private Ltd., New Delhi, 2nd Ed., 1980; SAVICH, RICHARD S., "The Use of Accounting Information in Decision Making", The Accounting Review, July 1977; CAPLAN, EDWIN H., Management Accounting and Behavioural Science, Addison-Wesley Publishing Company, Inc., Philippines, 1971; BATTY, J., Corporate Planning and Budgetary Control, MacDonald and Evans Ltd., London, 1970; RAHMAN, MAHDUDUR, "Management Decision Making in a Developing Country: A Case Study in Bangladesh", Institute of Business Administration, University of Dacca, 1980; HYE, MD. ABDUL, "Acceptance and Use of Budget by Managers of Nationalised Industrial Enterprises in Bangladesh", Unpublished Ph.D. Thesis, University of Dhaka, April, 1982; HOWE, M., "Accounting Information and Product Decisions in Multi-Product Firm", Unpublished Ph.D. Thesis, University of Sheffield, U.K., 1961; RAHIM, A.M.A., "Industrial Managers' Acceptance and Use of Budgetary Control Techniques - An Empirical Approach," Unpublished Ph.D. Thesis, University of Manchester, 1969, quoted by HYE, MD. ABDUL, op. cit.

problem for National Association of Accountants.[23] The functions of decisions and control are not complete and fulfilled until managers individually or collectively have studied accounting information provided by the financial statements and reports as well as information supplied by the financial markets, Government statistics and other related sources as fully as practicable in every way that would help in taking effective decisions and control of the activities within an organization.[24] It may thus be concluded that there is a general concensus among the authors on the issue that accounting information is vital for managerial use in decisions and control.

The importance of use by management of accounting information can be traced back to the ancient civilization of Egypt and Babylonia. Accounting records of a sort have been found in Minoan palaces, Egyptian tombs and Assyrian temples dating from more than two millennia before the birth of Christ. In that early stage, accounting was mainly concerned with assessing and safeguarding the wealth of individuals and the simple joint ventures representing the business firms of the age, i.e., its primary orientation was the maintenance of records of historical data

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23 HORNGREN, CHARLES T., "Security Analysis and the Price Trends" Accounting Review, October 1955; HORNGREN, C.T., "The Funds Statement and Its Use by Analysts", Journal of Accountancy, January, 1955, & BACKER, MORTON, "Costing Inventory for Measuring Periodic Income and Financial Position", A Research Project sponsored by the National Association of Accountants (NAA), August, 1966.

24 PERRIN, H.J., "Budgetary Planning and Control in the British Industry", Unpublished Ph.D. Thesis, University of London, 1958, pp. 15-16, quoted by HYE, MD. ABDUL, op.cit.

for equity and fiduciary purposes.[25] With the passage of time, the concept of accounting has changed and the use of accounting information in decision making and control process of business organizations has been a recent phenomenon.[24] Modern management acknowledges the fact that through the ages, organised society found the need to maintain some kind of accounting records and historical information. The progressive role of accounting was the result of a chain of events which started from the beginning of the Industrial Revolution in the eighteenth century. In the early stage, the business and economic organizations were not complicated in respect of generating and processing of accounting data and information for managerial decisions and control of enterprise activities. But with the rapid increase of national demand for products accompanied by the introduction of mass production technique and growth of large scale economic organizations in the second half of the nineteenth century, the role of the business and industrial organizations began to change and the concepts of specialization and division of labour also emerged. The situation led to the growth of large-scale companies with separation of ownership from management. The birth of new concepts with concomitant change in the role of the organizations determined not only the characteristics of production techniques but also influenced and moulded the whole organization structure including the role of accounting as an information system to help management in its decision making function.[27]

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[25] CAPLAN, EDWIN H., op. cit., p.9.

[26] Ibid., p.10.

[27] Ibid., p.11.

Accounting as an information system generates and supplies information to be used for managerial decisions and control purposes. Accounting is one of the very few disciplines in the practice of which information may be transformed into financial and quantitative data -- in the form in which it is most useful.[28] To-day, the broad-based thoughts on the objectives of financial reporting lay stress on the presentation of useful information rather than the accounting method itself. The Study Group on the Objectives of Financial Statements emphasizes that the basic objective of financial statements is to supply information which would be used for making economic decisions.[29] Accounting is gradually becoming more and more decision-oriented owing to the sheer necessity of its survival in to-day's business environment.[30] The present day accounting system thus, provides information on every sort of activity of the business for the stated purpose.

The present state of accounting discipline and its future perspective have drawn considerable attention from the academics and the professionals alike in recent years on its broad-based

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28 ATAISE, GEORGE K., "Information for Proprietors and Others", National Papers, International Congress of Accounting (10th), Sydney, 1972, p.281.

29 American Institute of Certified Public Accountants (AICPA), Study Group on the Objectives of Financial Statements, Objectives of Financial Statements, New York, 1973. (It is popularly known as the Trueblood Report after the Chairman of the Study Group - Mr. Robert Trueblood).

30 CHAKRABORTY, S.K., "Accounting for Decision Making and Control", Topics in Accounting and Finance, Ed. by Chakraborty, S.K. et.al, Oxford University Press, Calcutta, (C) Indian Institute of Management, Calcutta, 1976, p.13.

objectives as evident from various empirical research studies in accounting.[31] In an economic entity, accounting performs two vital services for management — it acts as the best possible information system and it also provides professional advice to management in its decision making and control functions.[32] Thus, accounting and its implications in economic progress which has today attracted the attention of responsible persons all over the world in both the domestic and the international forums, are expected to provide management with various types of information for rational decisions and control of business operations.

There are different opinions on accounting information and data. Only a few of the opinions are mentioned here. All data or information obtained from or created in the accounting system of a firm are termed as accounting information, whether contained in its financial statements, or special reports either technical or economic and/or verbal statements.[33] When any accounting data change the state of mind of any responsible persons, it becomes information which is itself decisional. Here, information slightly differs from data. Information consists of classified and interpreted data that are used for decision-making. More precisely, data are recorded experiences, i.e., representations

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31 Cf. BALL, R., "Index of Empirical Research in Accounting" Journal of Accounting Research, Vol. 9, No.1, 1974 (Ball Reported 258 Research Studies from 1952-70 of which 184 were done during 1960-70).

32 ROSS, HOWARDI, "The Current Crisis in Financial Reporting", The Journal of Accounting, August, 1967, p.65.

33 BRUNS, WILLIAM J. (JR), op. cit., p.471.

of perceived attributes of certain objects (here, economic activities) and information means recorded experience useful for some particular purpose which is ultimately decision-making of some kind in all cases though immediately it may be planning or control.[34] So, data collected, processed and transmitted for a particular use or cause yield information. In usage, it is difficult to separate them (data and information) out clearly. Therefore, for all practical purposes, information and data have been treated in this research as synonymous.

Accounting data have been defined as the monetary expression of business condition and activity and in many cases become a by-product or at least a joint product of information generated for other than accounting purposes.[35] Accounting data are the outputs in the process of shaping information and accounting information is the output of this process and in turn, the inputs for decision making process, and thus the outputs of decision-making process are decisions.[36] Financial data presented in the form of formal financial statements are the outputs of an enterprise's accounting system — these data represent the measurable indicia of

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[34] AMEY, LIOYD R. and EGGINTON, DON A., op. cit., p.6.

[35] TIGGES, K.E., op. cit., pp.26-32.

[36] TURK, IVAN, op. cit.

performancesalready achieved and of financial conditions presently prevailing.[37] On the other hand, accounting system refers to the methods by which financial data about a firm or its activity are collected, processed, stored and/or distributed to members of the firm or management or other interested parties.[38] Then accounting information denotes pieces of information which are produced and communicated through the accounting system of an organization for the managerial use in operating controls, decision-making and performance evaluation.[39] Alternatively, if analysis is made, the essence of these definitions and concepts is that the same writers have used accounting and financial data and information interchangeably. Accounting information is interpreted broadly to include not only the conventional financial statements of an enterprise but also other information gathered together by the accounting and other related departments. Such information would include for an enterprise for example, the quantity of materials which are used in production, the percentage which the finished product bears to the reasonable material capacity of a manufacturing plant to produce this product and the real effectiveness in which materials are utilized in production.[40]

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37 BERNSTEIN, LEOPOLD A., Financial Statement Analysis-Theory, Application and Interpretation, Richard D. Irwin, Inc., Homewood, Illinois, 1978 and BERNSTEIN, L.A., The Analysis of Financial Statements, Dow Jones-Irwin, Homewood, Illinois, 1978, p.4.

38 BRUNS, WILLIAM J. (JR.), op. cit., p.471.

39 RAHMAN, MAWDUDUR, "An Empirical Investigation into Management Use of Accounting Information and the Influence of Selected Job Related Traits and Organizational Correlates", op. cit., p.7.

40 BURN, T.J. (Ed.), op. cit., p.235.

From the above definitions, it may be concluded that any data or information generated through an enterprise accounting system is termed here as accounting information. Accordingly, accounting information in this research denotes all data and information presented in Balance Sheet, Income Statement or Profit and Loss Account, and Fund Flow Statement and any other complete or partial financial reports of the selected nationalised industries in Bangladesh which are prepared for management use in its decisions and control functions. But since the broad subject of finance implies a plethora of readily available financial data from an organizational accounting system as well as from financial markets, Government statistics, information generated by economists, financial intermediaries and sources other than accountants, these are also considered for the purpose of financial decisions and control under study, particularly, for capital expenditure decisions and control. This is done primarily to elicit the impact of use of certain accounting information contained in financial statements of the selected nationalised industries together with certain non-accounting information emanating from financial markets, economic data, Government statistics and others in financial decisions and control.

In the light of the discussion made above, it can be said that in all commercial and industrial organizations, accounting information presented in the form of financial statements and reports, and other economic data and Government statistics as

supplied by financial markets need to be analysed and interpretated properly by management. Then, in the context of existing economic conditions, market trends, laws, competition, ability and efficiency of management, etc., the same financial statements, economic data, Government statistics, etc. may be used by management as bases and inputs for making intelligent business decisions. In the same way, users other than management like stockholders, legislators, lawyers, bondholders, and even general public need to have an understanding of the available accounting and non-accounting information and data as bases for decisions in their respective fields, so long these information portray the actual financial position and operating results of their businesses. Thus, accounting information, like other types of business information, economic data and Government statistics, is surrogates which management and other users as stated above, may apply them to carry out the decision process.[41] The managerial use of such types of accounting and non-accounting information in financial decisions and control is the basic premise underlying this study.

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[41] JAIN, TRIBHOWN N., "Alternative Methods of Accounting and Decision-Making : A Psycho-Linguistical Analysis, "The Accounting Review, January, 1973, p.96.

1.2 Statement of the Problem

With the background developed in the previous section as a frame of reference, the present research problem had been developed from the perspective of management use of accounting information in major financial decisions and control areas in the nationalised manufacturing industries in Bangladesh. Bangladesh was a primary producing region with little modern manufacturing industry in 1947. In 1949-50, the contribution of the manufacturing sector to the Gross Domestic Product (GDP) was only about 3 percent, the large-scale enterprises contributing just over half a percent. From being negligible in 1947 when real Gross National Product (GNP) per capita did not increase, the industrial base of Bangladesh reached a substantial level in 1960. Bangladesh later on had a good number of industries the sectoral contribution of which to the economic development of the country in terms of GDP was about 9 percent in 1969-70 as compared to 3 percent in 1949-50[43] and against this, the present contribution of nationalised manufacturing industries sector to GDP of the

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[42] LEWIS, STEPHEN R., Pakistan - Industrialization and Trade Policies, Oxford University Press, London, (C) Organization for Economic Cooperation and Development, 1970, p.160.

[43] ALAMGIR, MOHIUDDIN and BERLAGE, LODEWIJK J.J.B., Bangladesh: National Income and Expenditure 1949/50-1969/70, Research Monograph No. 1, Bangladesh Institute of Development Studies, Dacca, 1974, p.167 and PLANNING DEPARTMENT, GOVERNMENT OF EAST PAKISTAN, Economic Survey of East Pakistan, 1969-70, Dacca, 1970, p.58.

country was significant, nearly 6 percent[44] i.e. about 66 per cent of the total contribution made by industries before liberation. In respect of share of public ownership in total industrial assets of the country, it was at present 86 percent against 36 percent in 1969-70.[45] There was a sudden spurtin the growth rate of GNP in 1972-73. The slide in the economy began in 1974-75 and in 1976-77 its growth rate had fallen to a miserable 1.2 per cent.[46] But the industries produced essential consumer goods and key inputs for agriculture and accounted for about 70 percent of the total foreign exchange earnings of the country.[47]

The Government of Bangladesh nationalised all big and medium sized industrial enterprises in March 1972.[48] The main objectives of the industrial development programme as set out in the First and Second Five Year Plans were stated to be:[49] (i) pursuit of optimum efficiency of performances; (ii) generation of surplus;

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44 RAHIM, A.M.A., "Better Management of Nationalised Industries: Search for Performance Management", Bangladesh Economy: Problems and Issues. (Ed. by A.M.A. Rahim), University Press Ltd., Dacca, Bangladesh, 1977, p. 261.

45 SOBHAN, REHMAN, "Nationalisation of Industries in Bangladesh: Background and Problems", The Economic Development of Bangladesh Within a Socialist Framework. (Ed. by Robinson and Griffin), Macmillan, London, 1974, pp. 181-185.

46 BHATIA, B.M., Pakistan's Economic Development, 1948-78, Vikas Publishing House Pvt. Ltd., New Delhi, 1979, p. 248.

47 MINISTRY OF FINANCE AND PLANNING, FINANCE DIVISION, Bangladesh Economic Survey (1981-82) Dhaka, p. 29.

48 Bangladesh Industrial Enterprises (Nationalization) Order 1972 (President's Order No. 27 of 1972), The Bangladesh Gazettee, March 26, 1972 and MINISTRY OF INDUSTRIES, GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH, Industrial Investment Policy for 1972-73, January, 1972.

49 PLANNING COMMISSION, GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH, The First Five Year Plan (1973-78), Dacca, 1973, pp. 208-209 & The Second Five Year Plan (1980-85), Draft, Dacca, 1980, pp. XIII and pp. 7-9.

(iii) creation of employment and income; (iv) ushering in a self-reliant economy through utilization of the nation's own resources; (v) running the business of the enterprises under nationalised industries on commercial principles and (vi) earning and/or saving of foreign exchange through exports of products and/or by substituting imports of the products. The relative importance of economic policy in the public sector industries could be thought of in terms of its effects on the overall rate of growth of manufacturing industry.[50] Management at corporation and enterprise levels was solely responsible to see that the objectives were effectively realized. But it is admitted that the objectives of the public sector industries had not been achieved upto the desired level. It may be mentioned that while the First Five Year Plan (1973-78) aimed at an annual growth rate of GDP at 5.5 percent, creation of employment opportunities for 41 lakh man-years and a reduction of dependence on foreign assistance to 27 percent of total investment, the achievements during the same plan period were: GDP increased at an average annual growth rate of 4.0 percent, an additional employment of 30 lakh man-years was created and only 59 percent of investment in real terms was realised and during the Two Year Plan (1978-80) period also, the GDP increased by 4.0 percent only.[51] In the industrial sector,

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50 LEWIS, STEPHEN R.(JR.), Economic Policy and Industrial Growth in Pakistan, George Allen and Unwin Ltd., London, 1969, p.156 and QURESHI, ANWAR IQBAL, Pakistan Marches on Road to Prosperity 1958/59-1963-64, Ferozsons Ltd., Rawalpindi, 1965, p.3.

51 PLANNING COMMISSION, GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH, The Second Five Year Plan (1980-85), Draft, Dacca, 1980, p.1-2&3.

although installed capacity had increased in several industries since 1972, yet the overall industrial production was still below the level of 1969-70. This sector was faced with a plethora of problems, such as shortage of entrepreneurial and managerial expertise, capital goods, materials and spare parts, adverse liquidity position, shortage of credit, labour unrest, etc. Under utilization of the existing capacity of the nationalised sector which accounted for 85 percent of the industrial production facilities in the country was a major disappointing feature. In jute the capacity utilization was only 60 percent; in cotton textile, 75 to 80 percent; in sugar, 60 percent; in steel, 30 percent; in newsprint, 66 percent; in cement, 34 per cent; in TSP, 21 percent; in leather, 17 percent and in cigarettes, 24 percent.[52] The estimated loss of production in 1974-75, due to such under-utilization of capacity in jute, cotton, textile, sugar, steel, paper and board, fertilizer and chemical industries was a colossal sum of Tk. 550 crore. The under utilization of capacity not only affected production but also curtailed the scope for additional employment. Of all the handicaps which affected the earnings of the nationalised industries, the management inefficiency appeared to have been most hurting.

Despite the fact that the nationalised industries with their specific goals, occupy predominant position in the national economy, it is alleged that they were beset with various types

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52 Cf: The White Paper on Country's Economic Situation issued for the first time prepared by the Economic Task Force appointed by the President of the People's Republic of Bangladesh on August 25, 1975. (Ref. The Bangladesh Observer, Dacca, dt., Sept. 13, 1975).

of problems which stood in the way of achievement of their goals. The kind of these problems was related with the central issue of managing i.e., the decision-making and controlling the affairs of the public enterprises, thus the efficient use of resources in this sector was a matter of great concern.[53] Poor performance of nationalised industries in terms of reduced productivity, poor profitability, increased wastage and high cost of production worried very much the economists, the management administrators, the executives and the Government.[54] The reasons for non-realization of major objectives of the nationalised industries appeared to be many which had been reflected from time to time in the writings of the economists, planners, financial analysts, management experts and researchers of the country. Various economic, social and political factors had been identified by them as contributing elements for non-fulfilment of the set objectives and unsatisfactory financial performance of the nationalised industries. Among them, inadequate use by management of accounting information and other related non-accounting

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53 AHMED, MUZAFFER, "A Case for Managerial Service in Public Sector in Bangladesh", The Journal of Management Business and Economics, Vol. 9, No. 3, Institute of Business Administration, University of Dhaka, July 1983, p.267.

54 WORLD BANK, World Development Report, Dacca, August 1979, p. 64; PLANNING COMMISSION, GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH, The Two Year Plan (1978-80), p.151 and p.158; AHMED, QAZI KHOLIQUZZAMAN, "The Manufacturing Sector of Bangladesh : An Overview", The Bangladesh Development Studies, Vol. 6, No. 4, Autumn, 1978, p.401; HABIBULLAH M., Industrial Efficiency and Profitability in Bangladesh, Bureau of Economic Research, University of Dacca, 1974, pp.1-2 and p.103; HABIBULLAH M., "Problems of Nationalised Industries", The Business Review, Vol. 3, No. 2, April-June, 1977, p.20.

and economic data in financial decisions had been mentioned as one of the important variables for such situation.

While evaluating the performance of nationalised industries it was felt by an economist[55] that at the public sector industries level, adequate accounting information was not maintained, proper costing was not applied and there existed very little cost consciousness among the executives of the nationalised industries. The Planning Commission also remarked that the viability of public sector industries had suffered badly due to inadequacies in organization structure, policies and programmes for personnel development, financial accounting practices including procurement, purchase and sales, technical management, capital expenditure decisions, various administrative parameters such as proper delineation of duties and responsibilities, working capital decisions, profit decisions, span of control at different levels, supervision and communication of data practices, delegation of authority commensurate with responsibility at different levels, etc.[56] Another study[57] on the management and performance of industries identified some problems in regard to financial matters such as inherited liabilities of abandoned and taken-

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55 AHMED, QAZI KHOLIQUZZAMAN, "The Management of Nationalised Industries Sector in Bangladesh : Some Comments on the First Five Year Plan Proposals", Political Economy, Vol. 1, No.1, 1974, p.257.

56 PLANNING COMMISSION, GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH, The Second Five Year Plan, 1980-85, (Draft), p. XIII and pp. 24-25.

57 SOBHAN, REHMAN and AHMED, MUZAFFAR, Public Enterprise in an Intermediate Regime : A Study in the Political Economy of Bangladesh, The Bangladesh Institute of Development Studies, Dacca, 1980, pp. 489-508.

over industrial units, liquidity gap, capital structure, determination of rate of return on funds provided by the Government and the specialised financial institutions. Another economist pointed out some deficiencies in the organization of finance functions, capital investment decisions, cash and material management and inventory control system of industries in Bangladesh.[58] In a recent study,[59] it was observed that of the many factors contributing to the poor performance of public sector industries, management inefficiency appeared to be the major one and out of the various aspects of management, financial planning and control seemed to be the weakest in case of public sector industries. In a paper[60] presented at the first National Seminar on Industrial Finance in Bangladesh, Professor H. Rahman also pointed out some problems of nationalised industries, viz., reliability of data, inadequate commercial freedom at enterprise level, absence of proper performance appraisal, absence of business type budget, problems of cost control, inappropriate pricing policy, inadequate internal sources of finance, inadequate feedback of information, over capitalization, poor inventory management and foreign exchange limitations which affected thereby the financial

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58 ISLAM, NURUL, Development Planning in Bangladesh : A Study in Political Economy, University Press Ltd., Dacca, Bangladesh, 1979, pp.115, 165-66 & 229.

59 HAQUE, MD. JAHIRUL, "Financial Planning and Control in Public Sector Industries in Bangladesh", Unpublished Ph.D. Thesis, University of Dacca, 1981, pp. 15-16.

60 RAHMAN, A.H.M. HABIBUR, "Essential Tools of Financial Management and Their Applicability in Nationalised Industries in Bangladesh", Industrial Finance in Bangladesh, (Ed. by A.H.M. Habibur Rahman), Department of Finance, University of Dacca, 1975, pp.65-71.

operations and profitability of the enterprises. Still another observation revealed that the current unsatisfactory performances of the nationalised industries and the shaky basis for future development of this sector were largely attributable to the failure of policy and decision making to provide an effective framework reflecting the proper bases of decision making.[61]

From the observations made above it appears that among various factors contributing to the unfavourable financial performances and operational inefficiencies of the industries concerned, ineffective system in management information and inadequate use by management of accounting information in financial decisions were noteworthy. It also appears that there were defects at the preparation level where adequate and substantial accounting information were not properly maintained and that there were also loopholes at the policy level where accounting and costing information were not properly considered in respect of the financial decisions of the industries. The partial recognition of accounting information as bases and inputs for decision-making process seemed to have resulted from the defective and unstructured decision-making process at different levels of management as well as inefficient system of management information prevailing in the nationalised industries. Thus, it may be concluded that management policy for proper preparation and analysis of financial statements and reports with adequate use of accounting information thereof in financial decisions and their feedback at all stages

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61 AHMED, Q.K., "Manufacturing Sector of Bangladesh : An Overview", op. cit., p.414.

together with fixing up the accountability for shortfalls and variances at different levels seemed not to have been practised in the selected nationalised industries resulting in high cost of production and hampering profitability of the industrial enterprises. Further, the real challenge to the nationalised industries using accounting information was how effectively they used the qualitative and interpretative information derived from the analysis of financial statements and reports to make them more meaningful in the whole financial decision-making process applied in capital expenditure, working capital and profit areas of such industries.

But, despite the fact that policy makers, planners, management experts and academicians of the country recognised the problem, exact reasons for such dismal position were yet to be properly searched out. Since the profitability and operational efficiency of an effective management require, among others, adequate and accurate accounting information for proper formulation of decisions and adoption of control measures particularly in financial aspects,[62] an exhaustive study into the existing method of generating and preparing accounting information, the practice and extent of use of such information, and the management information and feedback system with a proper evaluation of its appropriateness for financial decisions appeared to be an useful area of fruitful investigation. Of course, several

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62 OTLEY, D.T., "Budget Use and Managerial Performances", The Journal of Accounting Research, Vol. 16, No. 1, Spring, 1978, pp. 122-149.

studies and higher research works[63] had been conducted on the topic related to the managerial use of accounting information in decision making and control. But most of the studies[64] dealt with the behavioural aspect of the use of accounting information in correlation with organizational sttucture, managerial traits and leadership style as well as with the use of accounting information in all sorts of managerial decisions in general. These studies did not, however, make any in-depth and comprehensive examination of the same issue as applied to management's financial decision areas only, taking this as a problem in the nationalised industries in Bangladesh in particular.

The present study had been undertaken in an attempt to fill in the research gap in this regard. This study had employed both accounting and non-accounting information for various financial decisions and control areas. The existing practice of management in using accounting information in financial decisions and the impact of presence or otherwise of such use of accounting information on the financial performances as seen through profitability of the nationalised industries in Bangladesh, were the main issues of the present study.

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63 BURN, THOMAS J.(Ed.), op. cit.; BRUNS, WILLIAM,J.(JR), op. cit.; SAVICH, RICHARD S., op. cit.; RAHMAN, M., "An Empirical Investigation into Management Use of Accounting Information and the Influence of Selected Job Related Traits and Organizational Correlates", op.cit.; HOWE, M., op.cit., RAHMAN, M., "Management Decision-Making a Developing Country : A Case Study in Bangladesh", op.cit. and TURK, IVAN, op.cit..

64 RAHMAN, M., "An Empirical Investigation into Management Use of Accounting Information and the Influence of Selected Job Related Traits and Organizational Correlates", op.cit.; BURN, T.J.(Ed.), op.cit.; HOWE, M., op.cit.; BRUNS, W.J.(Jr.), op.cit.; TIGGES, K.S., op. cit.; and SAVICH, RICHARD S., op. cit..

1.3 Objectives of the Study

The main objective of the study was to investigate the existing practice of using accounting information in financial decisions as well as to show the extent and impact of such use of accounting information on the financial performances i.e. profitability in order to judge the effectiveness or otherwise in achieving the overall objectives of the nationalised industries. The study, however, was designed to achieve the following specific objectives:

1. To make a brief review of industrial development with an evaluation of the management pattern and accounting system of the nationalised industries;

2. To assess the existing practice of management in using accounting information in major financial decisions and control areas in the nationalised industries by identifying the problems and difficulties encountered in the way of such use;

3. To evaluate the use of accounting and non-accounting information in capital expenditure decisions and control;

4. To evaluate the use of accounting information in working capital decisions and control;

5. To evaluate the use of accounting information in profit decisions and control;

6. To examine the existing system for management information, financial reporting and feedback in the selected industries and to identify the effectiveness or otherwise of the system for using accounting information in financial decisions and control purposes;

7. To show the extent of use and impact of presence or otherwise of the use of accounting information in financial decisions and control on the financial performances as seen through profitability of the selected industries and

8. Finally, to highlight the main issues regarding accounting information generation and use for organizational effectiveness with suggested future outlook.

1.4 Coverage and Limitations of the Study

a. Coverage of the Study:

The nature of the present study was both empirical and analytical. The empirical results related to the Bangladesh nationalised industries. Since every decision in an industry is ultimately a financial decision,[65] among the various types of managerial decisions, financial decisions had been selected for the study purpose. Because financial decisions help management in selecting and procuring necessary finance from expected sources with minimum costs for utilizing the funds profitably and for controlling the financial operations effectively. There are various areas which are related with financial decisions and control, viz., tax planning, merger, reorganization and combination, capital expenditure, working capital, profit, price, product cost, etc. Of them, capital expenditure decisions and control, working capital decisions and control, and profit decisions and control were considered to be the major financial decisions and control. Out of host of business decisions, the above mentioned decisions and control areas had been selected in this study for special examination because of their particular importance in the field of economic and financial analysis. Then profits were taken here to be the central measure of performances of nationalised industries under study.

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[65] THACKER, RONALD J., and SMITH, RICHARD L., op. cit., p.5.

Presently, there were seven corporations of which five corporations that were administering and controlling the affairs of the nationalised industrial (manufacturing) enterprises had been covered in the study. These five corporations were: Bangladesh Jute Mills Corporation (BJMC), Bangladesh Textile Mills Corporation (BTMC), Bangladesh Sugar and Food Industries Corporation (BSFIC), Bangladesh Steel and Engineering Corporation (BSEC) and Bangladesh Chemical Industries Corporation (BCIC). The remaining two corporations, viz., Bangladesh Minerals Exploration Development Corporation (BMEDC) and Bangladesh Forests Industries Development Corporation (BFIDC) have been excluded. The five corporations had been entrusted with five types of industries, viz., Jute, Cotton, Textile, Sugar and Food, Steel and Engineering, Chemical and Fertilizer. As on June 1980,[66] BJMC had 76 Jute Mills under its jurisdiction, BTMC had 59 Textile Mills, BSFIC had 43 Sugar and Food Enterprises, BSEC had 37 Units and BCIC had 30 Enterprises totalling 245 enterprises of which 74 enterprises had been established during 1951-52 to 1970-71 under public sector.[67]

b. Limitations of the Study:

The present study would undergo certain limitations. Firstly, the study did not consider the influence of organizational struc-

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66 BANGLADESH BUREAU OF STATISTICS, STATISTICS DIVISION, MINISTRY PLANNING, Monthly Statistical Bulletin of Bangladesh, Dacca, June, 1980, p.337.

67 BANGLADESH INDUSTRIAL DEVELOPMENT CORPORATION (BIDC), BIDC in Figures, Planning Division, BIDC, Dacca, 1972, p.46.

ture, managerial traits and leadership style on the use of accounting information in managerial financial decisions. Secondly accounting information generated and processed in the enterprises under the selected Sector Corporations were not in the desired form owing to the fact that due importance was not given to financial statements and other reports by the authorities concerned thus requiring reprocessing of the presented accounting information for meeting the requirements of the study. Lastly, certain materials could not be used for study purpose because these were not available due to lack of desired co-operation of the agencies concerned.

1.5 Presentation

The presentation of this study has been organised into nine chapters. The first chapter has been devoted to the general introduction of the study in its theoretical perspectives covering background, problem statement, objectives, coverage and limitations and plan of the study. Chapter two presents the research design and methodology and describes the process of research, including the techniques for collection and analysis of data, and paradigm and conceptualisation of variables. In the third chapter, the situational context of the research problem wherein brief review of industrial development, management pattern and various aspects of accounting system of the nationalised industries in Bangladesh have been presented.

Chapter four discusses the use of accounting and non-accounting information including economic data, Government statistics, etc. in capital expenditure decisions of the nationalised industries in Bangladesh. Chapter five deals with the use by management of

accounting information in working capital decisions of the industries. Chapter six attempts to show the use of accounting information in profit decisions in the industries under study.

Chapter seven deals with the system for management information and financial reporting with an evaluation of its effectiveness and appropriateness for using accounting information by management of the selected industries in financial decisions.

Chapter eight shows the extent of use and impact of presence or otherwise of the use of accounting information in major financial decisions and control areas on the financial performances as seen through profitability of the selected industries. Finally, the concluding chapter reviews the findings and main issues and indicates the implications for organizational policy and possible concerns for further research. The chapter has been concluded with some thoughts on the adequate use by management of accounting information in financial decisions of nationalised industries in Bangladesh so that the objectives of these industries might be effectively met at all levels.

CHAPTER - 2

RESEARCH DESIGN AND METHODOLOGY

2.1 Definition of Concepts

The present study was concerned with use by management of accounting information in financial decisions and control of nationalised industries in Bangladesh. While financial performances, that is, profitability and productivity, were considered as the end-result variables, the management use of accounting information in capital expenditure decisions, working capital decisions and profit decisions were taken as explanatory variables. Thus, the variables which were of interest in this study could be grouped into four primary groups: (a) the end-result variables emanating from the financial performances bearing the testimony of accounting information use, (b) variables related to the use of accounting information in capital expenditure decisions and control, (c) variables related with the use of accounting information in working capital decisions and control and (d) variables related with the use of accounting information in profit decisions and control.

Since 'concepts' are short-hand representation of a variety of facts,[1] here we had outlined the main concepts used as the basis for operationalising the variables and for the development of instruments of their measurement.

[1] TANDON, B.C. (Ed.), Research Methodology in Social Sciences, Chaitanya Publishing House, Allahabad, 1979, p.39.

The concept of 'use', in the present study, means use of accounting or financial information for purpose of discharging managerial functions of decisions and control related particularly with the financial operations of the nationalised industries.

Then, the concept of 'management use of accounting information' means the use by management of the information and data generated and reported through the accounting system as well as of the financial markets information, Government statistics and other economic data in financial decisions of the nationalised industries.

Variables Emanating from the Use of Accounting Information in Financial Decisions:

(a) The end-result variables emanating from the financial performances bearing the testimony of accounting information are: (1) profitability and (2) productivity.[2]

(1) Profitability: The principal index of the financial performances is profitability which has been taken to mean return on owners equity, and (i) return on sales (ROS), (ii) return on investment (ROI) and (iii) return on capital (ROC) employed have been considered as the important indicators or best measures of profitability. Whereas, return on sales is calculated by dividing earnings before interest and taxes (EBIT) by sales, return on investment is calculated by dividing EBIT by the present

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2 MAHESHWARI, B.L., Decision Styles and Organizational Effectiveness, Vikash Publishing House Private Limited, New Delhi, 1982, p.24.

total investment (both net fixed assets and current assets) and return on capital employed is calculated by dividing the net profit after interest and taxes by the capital employed (total tangible assets minus total current liabilities). The return on sales is applied to measure the sales efficiency of the industry. The return on total investment is applied to see the adequacy of the overall results. Return on capital employed is an aggregate measure of the overall efficiency in running an enterprise. It is generally accepted as a measure of management's efficiency in the employment of its assets.[3] The main advantage of these indicators is that they help in evaluating the effective return to the Government against the total resources that it has invested in different nationalised industries.[4] Profitability is not a static condition, it is like a temperature chart. It is influenced by innumerable contributory variables or factors but in this study the use of accounting information in different financial decisions had been treated as one of the important contributory factors or variables of profitability.

(2) Productivity: Another end-result variable emanating from the financial performances is productivity which may be defined as the relationship between outputs or end-results and

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[3] MISHRA, N., Accounting for Price Level Changes, Sultan Chand and Sons, New Delhi, 1982, p.126.

[4] SYED, REZA H. (Ed.), Role and Performance of Public Enterprises in the Economic Growth of Pakistan, Investment Advisory Centre of Pakistan, p.142.

efforts employed to achieve them.[5] It is usually measured by dividing the output by the input. The simple measure of productivity is computed by dividing the output by the labour input and it is called labour productivity. On the other hand, when the output is divided by the capital employed in the enterprise, it measures the capital productivity and when the output is divided by the machine input, it becomes machine productivity. Material productivity is calculated by dividing the material cost by the number of units produced. Productivity however, is a function of many factors which are too much complicated for measurement.[6] It may be recalled that in this research, our attention was on profitability rather than on productivity.

(b) Variables related with the use of accounting information in capital expenditure decisions and control are (1) capital expenditure requirements, (2) capital structure, (3) capital expenditure financing and (4) capital expenditure control, a brief discussion of which is given below.

While determining the funds required for starting an enterprise or expansion or balancing, modernisation and replacement (BMR) of the same, the calculation of major components of capital expenditure would be tantamount to the capital expenditure requirements. This can be done on the basis of various factors which may include the actual cost of similar projects. The

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5 HABIBULLAH, M., Industrial Efficiency and Profitability in Bangladesh, op. cit., p. 3.

6 HABIBULLAH, M., Some Aspects of Productivity in the Jute Industry of Pakistan, Bureau of Economic Research, University of Dacca, 1968, p.130.

components of capital expenditure of a new enterprise or expansion or BMR of one enterprise as stated in Project Proforma are: pre-construction expenditure, construction expenditure, machinery and equipments, and other related costs.

Then, capital expenditure decisions also include capital structure decision which may be termed as the equity-debt ratio decisions of the enterprise. Various influencing factors are considered while making such decisions of which relative costs and relative returns are noteworthy.

Capital expenditure financing decisions, another important variable, is related to the issues regarding financing the capital expenditure, that is, the choice between Government and institutional finance, between local finance and foreign finance, and between equity finance and debt finance, considering various accounting and non-accounting factors for the purpose.

Finally, the capital expenditure control or evaluation is an important aspect of total capital expenditure programme, which is done through treasury and budgetary control techniques. Actual accounting figures or information for the period under review, compared with the budgeted requirements and with prior periods, furnish a useful basis for capital expenditure control or evaluation by management of the enterprise.[7]

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[7] BURN, THOMAS J. (Ed.), op. cit., p.241.

(c) Variables related to the use of accounting information in working capital decisions are briefly stated below:

(1) Working Capital Requirements Decision: While deciding the short-term funds, a proper diagnosis of the expenses required for smooth running of business activity is to be made considering many factors which influence the size. Of these, factual accounting figures together with nature of business and production policies might be considered for the purpose.

(2) Working Capital Structural Components Decision: it includes (i) Inventory Decision, (ii) Accounts Receivable Decision and (iii) Cash Decision. Inventories which constitute the major element in working capital, need to be decided keeping in view various factors, to maintain the optimum level of inventory. Then, accounts receivables, another significant component of working capital, comprise the credit and collection policies of the enterprises and require to be decided efficiently by considering factors related to accounting information of which cash discount is important. Finally, cash an important component of current assets, is to be decided for formulating cash policies and procedures based on normal and abnormal requirements of the enterprises and considering a variety of factors such as nature of the business enterprise, size of sales in relation to fixed assets, credit position of the enterprises, status of enterprise receivables, inventory, etc.

(3) Working Capital Financing Decision: Having decided the requirements and structural components of working capital, the various sources of finance required to run the operations of the

enterprises need to be decided properly. The various sources might be trade dues and other sundry creditors, bank short-term borrowings, non-bank short-term borrowings, long-term borrowings and/or equity.

(4) Working Capital Control or Evaluation: Working capital control or evaluation is an important aspect of total working capital programme requiring the comparison between working capital requirements and its actuals since actual accounting figures compared with budgeted requirements and with previous periods, would furnish a useful basis for working capital control or evaluation by management.[8]

(d) Variables related with the use of accounting information in profit decisions are: (1) sale price and sales estimates, (2) cost of production estimates, (3) operating expenses estimates and (4) profit targets. The sale price and sales estimates include decision regarding the determination of selling price and estimated income from the expected sales which are considered by taking into various factors such as volume of production, ability to sell the products, market conditions, etc. Then, production and cost of production estimates represent decisions regarding expected production which is dependent on estimated sales and expected investment in raw materials, work-in-process and finished inventories as well as decisions regarding the estimated cost of production embracing all prime costs and factory overhead expenses. Operating expenses estimates also represent decisions regarding the estimates of future expenses like office and administration and selling and distribution. Finally, the

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[8] Ibid., p. 242.

profit targets signifying expected profit before interest and taxes are shown in the revenue budget which is an estimate of expected future income and costs and expenses.

2.2 Measurement of Major Variables

In this section we recounted the processes of operationalising the concepts. These concepts could be viewed as constructs and were operationally defined as variables. However,'the operational definition of a construct is not complete until there are exact and complete specifications of the set of instruments to be used, as well as instructions for the operations to be carried out to determine the value which the variables assume in each case.'[9]

The first set of variables related to the measurement of 'management use of accounting information in capital expenditure decisions and control area'. The uses of accounting information were considered in terms of the extent of use or or reliance on accounting information by the management for financial decision areas. These were identified as points on a continum extending from high to low use as well as through presentation of data in different aspects. In particular, high and low use measurement was done through a questionnaire and it was supported by interviews.

In the like manner, the measurement of 'management use of accounting information in other financial decisions and control areas' was also done through (a) questionnaire, (b) interview and (c) an examination of the relevant documents - annual reports,

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[9] GROOT, A.D. DE, Methodology, Foundation of Inference and Research in the Behavioural Sciences, Mouton - The Haque, 1969, p.241.

annual accounts, annual budgets, filled up project proforma, enterprise manuals and office records of the selected corporations as well as the enterprises under their control.

The extent of the use of accounting information in each financial decisions was measured by using the Likert-type 5 point scale for the replies to the relevant variables. The same scale was used on the following grounds:[10]

(i) It was easier to construct and use for the particular type of interviewees.

(ii) The range of responses permitted to an item provided more information about the individuals' opinion on the issue referred to by the given items.

(iii) It permitted the interviewee to express his opinion on a range from 1 to 5 degrees and it was considered more reliable than a patterned interview.

(iv) It permitted easy, precise and less expensive coding.

(v) Its simplicity was also observed in many prior studies.[11]

2.3 Collection of Data : Sources and Methods

Keeping in view the objectives of the study, attempts were made to collect detailed information and elaborate data, both quantitative and qualitative, having close bearing on the policies, practices and

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[10] LIKERT, RENSTS, A Technique for the Measurement of Attitudes, Archives of Psychology, 1932, No. 140.

[11] Cf., HYE, MD. ABDUL, op. cit., p.30.

extent of use by management of accounting information in financial decisions and control in the nationalised industries.

(a) Research Approach

This study is based on the following:

(i) Literature survey to review the practice and extent of use of accounting information abroad and in Bangladesh.

(ii) Review of accounting system and management information system in the light of their managerial uses.

(iii) Field study conducted in five nationalised industrial corporations Bangladesh adopting survey method (through questionnaire).

(b) Selection of the Samples

The study was located in the nationalised industries sector in Bangladesh. The descriptions of these industries in detail with their management and accounting systems had been provided in the Ch. 3. The initial criteria set for the selection of these industries were:

The practical consideration of cooperation from the industrial coeperations and enterprises under them as well as the economies of time and costs played the dominant role.

The initial contact with the management of the enterprises was made through the Head Offices located at Dhaka. We observed that the influence of accounts department in these enterprises was significant, though the contact was established directly through the Head Office higher level management, yet it needed support from higher and lower level executives of the enterprises for the purpose. It

required couple of meetings with top level executives individually to plan and executte the investigation and the selection of the sample enterprises.

Field study was conducted in the five industrial corporations, viz. BJMC, BTMC, BSFIC, BSEC and BCIC. For capital expenditure decisions, 74 enterprises set up during 1951/1952 to 1970/71 under public sector and 14 enterprises set up during 1972/1973 to 1981/1982 under nationalised sector were taken into consideration. For working capital and profit decisions, all the 245 enterprises were studied for the periods, 1975/76 to 1979/80.

As the enterprises are scattered in different parts of the country, a sample type of enquiry was considered feasbnable for opinion survey to cover respondents at the unit level because of time and resource constraints. Moreover, since use of accounting information in financial decisions and control at corporation level had been gaining importance, a study of the opinion or attitude of the responsible persons engaged at the industry level was also considered very significant. This obvious complex situation necessitated the construction of the sampling frame and sample size. Accordingly, it was decided to select 10 percent units from each selected corporation on random sample technique.

An opinion survey method was conducted through a questionnaire in 25 enterprises out of 245 enterprises, taking 5 enterprises from each corporation selected thrugh random sampling method. Statistically, we were satisfied with our sample size. However, we would not claim that our samples for opinion survey represents all cross-

sections of the enterprises in an economic environment under study. For selection of sample units from total units of five corporations, the random sampling technique was preferred.

Stratified random sampling had been used for the present study. Stratification was done according to corporations. Then from each strata (individual corporation) 5 enterprises representing 10 per cent of 245 enterprises were selected randomly.

(c) Questionnaire Phase

The main instrument used for the purpose of studing the opinion of the samples was the interview schedule.

We used a four-part questionnaire for the measurement and collection of the greater portion of data. The questionnaire included mainly four categories of instruments to cover the range of the variables we intended to measure in the study. These were the instruments relating to: (i) the dependent variables - financial performances variables and (ii) independent variables, viz. (a) capital expenditure decisions and control variables, (b) working capital decisions and control variables, and (c) profit decisions and control variables. The questionnaire is shown in Appendix No. VIII.

In designing the questionnaire, we draw on our experience in the area together with the consultations of previous research studies and expert opinions both from business and academic fields. Although the interview schedules or questionnaire were prepared in the light of this background information, yet the same was pre-tested among a group of enterprise heads and corporations' responsible

officers. Their responses and comments were helpful in revising and structuring the questions finally. Moreover, we made some adjustments of the questionnaire to meet the requirements of the conditions of nationalised industries where investigation was done after the preliminary interviews were completed.

(d) Interview Phase

Interview appointments were made through the corporation Head Office and enterprise offices. We interviewed 4 persons in each corporation totalling 20 persons at corporation level and 2 persons at each enterprise totalling 50 persons at enterprise levels. Interviews ranged from 2 hours to 3 hours. We used interview schedules for interviewing the enterprise heads and accounts chiefs at enterprise levels and chairmen, accounts chiefs, management information system chiefs and planning and development chiefs at corporation level. However, the wording of the questions were not rigidly followed and the technique of 'focussed interview' was followed.[12]

After collecting data and information from all the categories of the selected samples, Likert's attitude scoring method was used in particular, for compiling and computing the data to determine the extent of use of accounting information in financial decisions and control of the selected industries. Each of the decision area in the questionnaire was followed by five responses ranging from score 1 to 5 signifying low to high uses of accounting information.

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[12] MERTON, R.K. and KENDALL, P.L., "Focussed Interview", American Journal of Sociology, Vol. LI, 1946, pp. 541-59.

2.4 Statistical Techniques

In order to study the extent of use of accounting information in financial decisions, averages and Pearson's coefficient of correlation had been extensively used. The most important and widely used measure of correlation is the Pearson's Correlation Coefficient which is used where the variables are quantitative, that is, of the interval or metric ratio type and where the measurement is of ordinal scale.[13] Karl Pearson's measure of correlation is based upon Arithmatic Average and Standard Deviation and on the following assumptions: (1) the two series sought to be correlated are affected by a large number of independent causes which bring about a normal distribution in the series, (2) the forces affecting the distribution of items in the two series are related to each other in a relationship of cause and effect, and (3) there is a linear relationship between both the series.[14] It is very seldom that perfect relationships through the Pearson's Correlation Coefficient method are found in the social sciences, in part because of the limitations of the measuring instruments and also because of the difficulties of controlling all possible factors that may influence the two variables being studied.[15] We used correlation between use of accounting information in each of

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13 FERGUSON, GEORGE A., Statistical Analysis in Psychology and Education. International Students Edition (4th edition), McGraw-Hill Kogakusha, Ltd., Tokyo, 1976, p.102. and PAREL, C.P., et.al., Data Analysis and Interpretation. Philippine Social Science Council, Inc., 1979, p.171.

14 GUPTA, B.N., An Introduction to Modern Statistics, Bookland Private Limited, Calcutta, 2nd Ed., 1973, p. 504.

15 EDWARDS, ALLEN L., Statistical Methods. Holt, Rinehart and Winston, Inc., New York, 2nd Ed., 1967, p. 101.

fourteen variables and its score on each variable and used t-test to find significance, if any, of the difference between high use and the low use on each variable. The degrees of freedom for correlation and t-test was 3. The theoretical value of t at 10 percent and 5 percent level of significance for 3 degrees of freedom respectively was 2.353 and 3.182. Chi-square test was also widely used to test the extent of association and relationship between the variables. The statistical techniques for analysing the collected data were based on non-parametric statistical approach since they do not require measurements so strong as parametric tests.[16] The number of observations in this research is only five which was not sufficient for conclusive correlation analysis. Besides, the variables were designed to vary from 1 to 5 according to Likert's 5-point scale as noted earlier. So the range of variation seems to be small.

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16 SIEGEL, SIDNEY, Non-Parametric Statistics for the Behavioural Sciences, McGraw-Hill Kogakusha Ltd., Tokyo, 1956, p. 31.

CHAPTER - 3

THE SITUATION APPRAISAL OF NATIONALISED INDUSTRIES IN BANGLADESH

3.1 Brief Review of Industrial Development in Bangladesh

Bangladesh emerged as an independent country on December 16, 1971. The geographical area now comprising Bangladesh is well-known for the fertility of its land, the variety of its agricultural crops and the abundant supply of labour resulting in the early growth of industries based on agricultural raw materials. But the area remained undeveloped in trade, commerce, industry and agriculture during the British period because she turned out to be the hinterland for supply of raw materials for the growth of industries located in and around Calcutta. Although Bangladesh produced most of important raw materials including 70 percent of the total raw jute and enjoyed a world monopoly of finer quality of jute, yet not a single jute mill was set up in this region during the British rule.[1] The jute industry was almost wholly localised in West Bengal and drew the major labour supply from other provinces.[2]

As a part of Pakistan, Bangladesh in 1947 started with the poorest industrial base inhariting 10 cotton textile factories, 49 seasonal jute bailing press including 27 pucca presses, 58 small

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1 ISLAM, SHAMSUL, Public Corporations in Bangladesh, Local Government Institute, Dacca, 1975, p.26.

2 HABIBULLAH, MD., Employee-Centered Supervision and Productivity in the Jute Industry, Bureau of Business Research, University of Dacca, p. 159.

rice mills, 3 sugar mills, 1 cement factory, not a single jute mill, iron and steel plant, paper mill, coal mine, chemical or hydro-electric project.[3] In the early 50's, her industrial base was almost non-existent.[4] Between 1947 and 1971, Bangladesh made considerable progress in the development of industries. The Industrial policy of 1948[5] laid down that industrialization was to be carried through private enterprises together with suitable measures to be taken by the Government from time to time for processing the available raw materials into finished products for which there was an assured market at home and abroad. The revised policy announced in 1956 attached highest priority to essential and export potential industries.[6] It also emphasized the diversification of industries as well as standardisation of industrial products. Measures adopted by the then Governments for promotion of industries included, among others, import of required materials, supply of power, machineries and equipments, spares and components, provision of transport and communication, etc. Both private and public sectors were encouraged. The Government's attitude towards private industry had been increasingly sympathetic.[7]

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3 AHMED, NAFIS, An Economic Geography of East Pakistan, 2nd Ed., London, Oxford University Press, 1968, p.216.

4 ALAMGIR, M. AND RAHMAN, A., Savings in Bangladesh : 1959/60-1960/70, Bangladesh Institute of Development Studies, Dacca, 1974, p.118.

5 MINISTRY OF INDUSTRIES, GOVERNMENT OF PAKISTAN, The Industrial Policy Statement of 1948.

6 MINISTRY OF INDUSTRIES, GOVERNMENT OF PAKISTAN, The Revised Industrial Policy Statement of 1956.

7 WATERSTON, ALBERT, Planning in Pakistan : Organization and Implementation, The Johns Hopkins Press, Baltimore (USA), (C) 1963, p.140.

To hasten the process of industrial development, the Government established the Pakistan Industrial Development Corporation (PIDC) which started functioning in January, 1952.[8] Its main objective was to promote 15 specified industries in the private sector. However, her major objectives were the following:[9]

Firstly, to establish industries in such sectors as jute, cotton, textiles, sugar, fertilizer, paper and paperboard, pharmaceuticals, dye-stuffs, cement, etc. where private initiative was not forthcoming adequately; secondly, to encourage the private enterprises to collaborate with the PIDC in the growth and development of industries and finally, to make disinvestment of completed enterprises in favour of private sector thus revolving private sector funds for Balancing, Modernization and Replacement (BMR) and Expansion Programme of the existing enterprises.

After the operation of PIDC, private enterpreneurs found great interest in setting up industries in collaboration with the corporation. Upto February, 1962, the PIDC established 55 projects either on its own account, or in partnership with private enterprise.[10] Its investment in both completed and on-going projects during the then East Pakistan amounted to Rupees 89.99 crore including private investment of Rupees 24.13 crore.[11]

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8 AKHTER, S.M., Pakistan : A Developing Economy, Vol. I&II, Part-I, Lahore, Publishers United Ltd., 1967, p.10.

9 Charter of PIDC, quoted in Pakistan, 1955-56, Pakistan Publications, Karachi, August, 1956, p.119.

10 MINISTRY OF FINANCE, GOVERNMENT OF PAKISTAN, Economic Survey of Pakistan (1961-62), Economic Adviser to the Government of Pakistan, Rawalpindi, p.37.

11 Ibid., p.39.

The bifurcation of PIDC made in 1962 resulted in an increase in the rate of capital investment from Rs. 49.39 million in 1960-61 to Rs. 335.28 million in 1968-69 and the average annual investment in public sector during the EPIDC period was about Rupees 223.92 million against Rupees 67.38 million during the time of former PIDC.[12] The corporation however, undertook a lead in the industrial development in the region. During the five year period ending in 1970, its share in total investment was over half.[13]

PIDC and lateron E. Pakistan Industrial Development Corporation (EPIDC) played a very important role in the growth and development of industries in the former East Pakistan. In respect of industrial investment, a considerable portion in East Pakistan was owned by the non-Bengalee enterpreneurs. Bangladesh owned about 34 percent and 53 percent of fixed assets in jute and cotton textile industries respectively, and outside these two industries, there were only zix Bangladeshees who owned enterprises with assets worth above Tk. 2.5 million.[14] Though Bangalee entrepreneurs made considerable progress in small and medium industries and though these industries were highly profitable to the private owners, they were generally inefficient and social return was low and, in some cases, even negative.[15] With the emergence of Bangladesh, the role of public sector in the

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12 EPIDC, Progress Report, 1968-69. Dacca, 1970, p.11.

13 KHAN, AZIZUR RAHMAN, The Economy of Bangladesh, The Mcmillan Co. Ltd., London, 1972, p.72.

14 AHMED, QAZI KHOLIQUZZAMAN, "The Manufacturing Sector of Bangladesh : An Overview", op. cit., p.390.

15 Ibid., p.408.

Industrial development of Bangladesh had greatly increased and the whole pattern of industrial ownership and policy also had undergone radical change since the Government took over all industries abandoned by Pakistan and other absentee owners and nationalised the major large-scale manufacturing industries of the country such as jute, cotton textiles, sugar, steel and chemical on 30th March, 1972 under the Nationalization Order.[16]

The Government set up eleven sector corporations one each for Jute Mills, Textile Mills, Sugar Mills, Steel Mills, Engineering and Shipbuilding, Paper and Paper Board, Food and Allied Products, Gas, Oil and Mineral, and Fertilizer, Chemical and Pharmaceuticals. Then, the Government took over the management of the abandoned industrial units with assets worth about Tk. 1.5 million.[17] As a result, above 85 percent of the assets in the modern industrial enterprises came under public management and ownership.[18] Consequently, about 359 industrial enterprises were placed under the management of 11 sector corporations and about 375 abandoned industrial units were placed under the management of Disinvestment Board, Sena Kalyan Sangstha and Freedom Frighter Foundation.[19]

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16 Bangladesh Industrial Enterprises (Nationalization) Order, 1972 (President's Order No. 27 of 1972), The Bangladesh Gazettee, March 26, 1972.

17 As per decision taken at the Cabinet Meeting held in Dacca on February 28, 1972.

18 AHMED, QAZI KHOLIQUZZAMAN, "Aspects of the Management of Nationalised Industries in Bangladesh", The Bangladesh Development Studies, Vol. 11, No. 3, Dacca, July 1974, p.677.

19 Cf. Annual Reports of the Sector Corporations, Disinvestment Board and Sena Kalyan Sangstha for the year, 1974-75.

In 1976, the Government decided to disinvest small industrial units to the private enterprises and the sector corporations were re-organized through amalgamation reducing their number to 7 among which five, viz., BJMC, BTMC, BSFIC, BCIC and BSEC engaged in manufacturing had been selected as the area of the study because these nationalised industries used to play a very important role in the industrial development of the country. The share of public ownership of the total industrial assets of Bangladesh increased from 36 percent before liberation to 85 percent after liberation.[20]

However, the preceeding overview reveals that during the period of PIDC and EPIDC, 74 industrial units of Tk. 2417.26 million[21] were established in the public sector and 11 enterprises of Tk.184.86 million[22] were completely disinvested. On the other hand, following the industrial policy of 1975,[23] from 1972/73 to 1981-82, 14 enterprises were set up at a total cost of Tk. 8736.96 million under the selected 5 (five) sector corporations[23] and 162 industrial units were disinvested upto 1980 at a total sale price of Tk.6.73 crore.[24]

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20 SOBHAN, REHMAN, "Nationalised Industries in Bangladesh : Background and Problems", The Economic Development of Bangladesh a Socialist Framework, (Ed.) Robinson, E.A.G. and Griffin, Keith, The Macmillan Co., London, 1974, pp. 181-185.

21 EAST PAKISTAN INDUSTRIAL DEVELOPMENT CORPORATION, Progress Report, 1965-66, Dacca, 1967, pp. 49-50 and EAST PAKISTAN INDUSTRIAL DEVELOPMENT CORPORATION, EPIDC at Work - 1952-70, Dacca, 1970, pp. 2-6.

22 EAST PAKISTAN INDUSTRIAL DEVELOPMENT CORPORATION, Progress Report-1968-69, Dacca, 1970, pp. 56-59.

23 Vide Official Records of the Planning and Development Sections under BJMC, BTMC, BSFIC, BSEC and BCIC for the period under study.

24 PLANNING COMMISSION, GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH, The Second Five Year Plan, 1980-85, op.cit., p.XIII-136.

3.2 Management Pattern of the Nationalised Industries

The present sector highlights the management pattern of the nationalised industries together with their decision-making stages and levels. The management is characterised by a three-tier system: the concerned Ministry, Sector Corporations and Enterprise Management and the tiers are important decision-makking levels.[25] The Ministry represents the highest authority of decision-making. It exercises authority for managing them and acts as their owner on behalf of the nation. Keeping in view the national interest, it formulates policies for the corporations and the enterprises. It is accountable for the ultimate working of the industries to the Jatiya Sangsad (National Parliament) and through it to the people of the country.

The Sector Corporations, the second important decision-making level, work under the policy guidance and supervision of the concerned Ministry and are acccuntable to it. They run the enterpriges placed under their control and jurisdiction by Government order. The responsibilities of a sector corporation are stated below:[26]

i) to operate on commercial consideration, having due regard to national interests, in the most efficient and economic manner, within the policy, framework and guidance given by the Government;

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25 AHMED, QAZI KHOLIQUZZAMAN, "Aspectsof the Management of Nationalised Industries in Bangladesh", on. cit., p.687.

26 CABINET SECRETARIAT, CABINET DIVISION, Guidelines on the Relationship between Government and Autonomous Bodies, Corporations and the Autonomous Bodies & Corporations and Enterprises under them, Dacca, May 15, 1976, p.1.

ii) to continuously strive to improve its performances for attaining better results;

iii) to earn additional revenue for the Government and

iv) to convey to the Government any matter which, in the corporation's view, shbuld be provided for through a policy decision or by revision of an existing policy.

As such, the Corporations had been set up for "control, coordination and supervision of the activities and business affairs of the scheduled industrial enterprises placed under them and for exercising such powers of the Government as the Government may delegate to them".[27] There is a Board of Directors for each of the Corporations. This Board is responsible for general direction and administration of the affairs and business of a corporation and may exercise all powers and do all works and things which may be exercised or done by the Corporation.[28]

The third level is at the management of enterprises which are the productive industrial units of the respective corporations. An enterprise is managed by a Board consisting of the enterprise chief executive, and representatives of the Corporation, Controlling Ministry, Ministry of Finance and Bankers. The Board enjoys wider powers and authority to discharge its responsibilities. The chief executive is responsible for running the enterprise with such authority and operational freedom as is delegated by the corporation. Of

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[27] Article 17(a) as amended by P.O. No. 131 of the Bangladesh Industrial Enterprises (Nationalisation) Order, 1972 (President's Order No. 27), 26th March, 1972.

[28] Article 11 of President's Order No. 27 of March 26, 1972.

course, there is little scope for decentralization of authority from the corporation to the enterprise management. Since the Chairman of the Enterprise Management Board is a senior official of the corporation, the Board itself is very much under direct control of the corporation. The responsibilities of an enterprise are stated below:[29]

i) to operate on commercial considerations, having the regard to the national interests, in the most efficient and economic manner within the policy framework and guidelines prescribed in the rules and regulations constituted by the corporation and the Government.

ii) to continuously strive to improve its performance for attaining better results;

iii) to earn additional revenue for the Government and

iv) to earn more foreign exchange at minimum sacrifice.

The following observations, however, can be made from the above discussions on the management pattern of the nationalised industries under study:

Firstly, the powers and responsibilities of the three tiers have not been clearly spelled out. Consequently, implementation of responsibility accounting and budgeting become difficult and the concept of accountability gets confused;

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[29] "Guidelines on the Relationship between Government and Autonomous Bodies, Corporations and Corporations and Autonomous Bodies and Corporations and Enterprises under them", op. cit., p.8.

Secondly, corporations are under bureaucratic and strict control of the controlling Ministries from which they are to receive guidance and instructions. Corporations are not able to provide effective guidance to enterprises nor can they effectively tackle the problems of enterprises and keep watch on their performances.[30]

Thirdly, enterprise managements do not enjoy adequate authority for making decisions on various aspects and implementations and control thereof. Lack of authority is not only resented by enterprise management, but it is also used by them as an escape clause for defaults in performance. As a productive unit, the enterprise is very much in need of the authority for decision-making and control purpose, but under the present management pattern, this vital point has been missed. Rules of business for the nationalised sector are yet to emerge out of confusions and continued ad-hoc arrangement work is the dominating feature.[31]

Fourthly, performance measurement of the nationalised enterprise has been a problem[32] because appropriate criteria have not been developed for evaluating and measuring the performances of the nationalised industries and

30 AHMED, Q.K., "The Management of the Nationalised Industries Sector of Bangladesh: Some Comments on the First Five Year Plan Proposals", Paper presented at Bangladesh Economic Association Conference on the First Five Year Plan of Bangladesh held in Dacca, March 17-20, 1974.

31 SOBHAN, REHMAN and AHMAD, MUZAFFAR, Public Enterprise in an Intermediate Regime : A Study in the Political Economy of Bangladesh, op.cit., p.441.

32 RAHIM, A.M.A., "Better Management of Nationalised Industries: Search for Performance Measurement", Bangladesh Economy Problems and Issues (Ed.), University Press Ltd., Dacca, Bangladesh, 1977, p. 262.

Fifthly, the nationalisation programme has brought the functions of production under the direct control of the Government. But the pre-occupation of the Government with the traditional functions of civil and military nature has resulted in a lack of concern on the part of the Government to attend to the persistent problems like ineffective managerial decisions and control functions, lack of effective managerial enterprise control structure, lack of effective planning and programme for personnel development and absence of appropriate policies regarding labour and pricing of products[33] and inspite of rapid growth, it showed a declining trend in the efficiency of the industry.[34]

3.3 Accounting System in the Nationalised Industries

Accounting system that was practised during pre-liberation period in the industries set-up by the former EPIDC had been adopted later on by the nationalised industries including the Integrated Accounting System for all the industries in Bangladesh. The enterprises under the sector corporations follow the Integrated Accounting System (I.A.S.) which integrates financial accounting and cost accounting information in the same set of ledger. This system was introduced to serve purposes like the following:[35]

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33 AHMED, QAZI KHOLIQUZZAMAN, "The Manufacturing Sector of Bangladesh: An Overview", op.cit., p. 407.

34 AHMED, QAZI KHOLIQUZZAMAN, "The Jute Manufacturing Industry of Bangladesh (1947-1974)", Unpublished Ph.D. Thesis, The London School of Economics and Political Science, London University, 1976.

35 EAST PAKISTAN INDUSTRIAL DEVELOPMENT CORPORATION (EPIDC), Integrated Accounting System of E.P.I.D.C., Dacca, 1967, p.1.

i) to bring about uniformity in mode of accounting and presentation of accounting information to the higher management;

ii) to determine the per unit cost of production;

iii) to provide for effective use of a budget through month to month comparison of actual results achieved as against budgeted targets and

iv) to improve the reporting system as a whole.

Under this System, cost accounting provides historical information regarding cost of products which may be of little use to management for decision-making and control purposes. Because the allocation of cost among the various products is arbitrary. This inappropriate or whimsical basis of calculating equivalent production for unfinished goods make difficult the calculation of actual cost of production resulting in misleading figures for operating results. Moreover, the system is used primarily for internal reporting to the management.

Further, under the Integrated Accounting System the cost is determined productwise and cost centres are designed to arrive at productwise cost. But the introduction of process costing and standard costing may result in suitable allocation of cost and facilitate cost control. For this reason, Armitage and Norton, Chartered Accountants, Edinburgh who advocated the introduction of standard costing as far back as in 1968 observed: "it is more satisfactory to use a system of standard costing in which standard costs are calculated in advance, and actual costs are subsequently measured period

by period against those standards. Such measurements can disclose the extent and causes of changes in cost. Simultaneously, the profit or loss for the period can be measured and compared with the expected or budgeted profit".[36]

Under the present reporting system, enterprises are required to send reports concerning the operations of the individual enterprise to the management at the corporation level. But these are not very much used for decision-making and control purposes and enterprise management seems to have scanty feedback on these reports. It is alleged that these reports pile up at the corporation office and are not properly analysed and interpreted.[37] These are used only for compilation of some statistics and reports at the corporation level.[38] Since these reports are not regularly interpreted and followed up by the top management at the corporation level, the enterprise management has been sceptical about the necessity of the preparing the reports and do not give due importance to such work. It is not unusual to find some monthly reports having only actual columns filled in, keeping budgets and variance columns blank without their adequate use for managerial decisions and control purposes.[39]

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36 Investment of Productivity and Costs in Member Mills of Pakistan Jute Mills Accociation, June 1968 (Unpublished Report), Part-V, p. 12.

37 RAHMAN, MAWDUDUR, "On Budget Failures in Corporation", The Business Review, Vol. 3, No. 2, Dacca, April 1977, pp. 52-57.

38 KHAN, MUINUDDIN MD., "An Evaluation of Accounting Practices in Jute Industry", The Business Review, Vol. III, Nov., 1977, pp. 130-150.

39 RAHMAN, M., "On Budget Failures in Corporation", op.cit., p.55.

The usefulness of such system for the managerial decisions and control can be studied from the finding of a research project[40] conducted during pre-liberation period to determine the efficiency of the accounting system of the manufacturing industries in those days. The study covered 37 manufacturing concerns of various types and sizes including several jute mills in former East Pakistan (presently Bangladesh). Information had been collected on various aspects of the accounting system of the individual industrial enterprise and on the extent of use of accounting reports and statements by the management for decision-making and control purposes. Profit and Loss Accounts and Balance Sheets were studied for the purpose to assess the standards of accounting reports as well as to analyse the profitability of the enterprises as a measure of their efficiency. It was revealed in the same study that accounting practices in the former EPIDC enterprises were found to be better than those of the private local concerns, ratio analysis which is an important tool for management was used very little by the manufacturing enterprises, few firms took important decisions based on accounting data, enterprises practising cost accounting had higher profitability than enterprises which did not use the same, and in most of the enterprises the accountants were neither sufficiently qualified nor the accounting data were used for decision-making.

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40 BAQUER, A.A.M. and KHAN, MUINUDDIN MD., "Accounting Efficiency and Productivity", Bureau of Economic Research, University of Dacca, (Unpublished), 1974, pp. 122-145.

It may be mentioned here that the industries in those days were in the hands of private enterpreneurs. But with the emergence of Bangladesh, the whole situation in the field of industry had been changed in respect of ownership and management pattern. With the promulgation of the Bangladesh Industrial Enterprises (Nationalisation) Order on 26th March, 1972, the major industries were nationalised as mentioned earlier. Ownership of these industries had been vested in the hands of the Government and several sector corporations had been set up for the management of the respective industrial units. Consequently, the complexity and needs of management of these nationalised industries had been increased tremendously. The bigger and complex is the management, the greater is the need of an efficient and effective accounting system and such a system can only ease the decision-making process, stop wastage, improve the operational efficiency and thus ensure the profitability.[41]

With the above discussion about the industrial development, management pattern and accounting system followed by the corporations and the enterprises under their control, we now propose to discuss in the next three Chapters the use of accounting information in three specified financial decisions and control areas, viz., capital expenditure, working capital and profit separately.

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41 KHAN, MUINUDDIN MD., "An Evaluation of Accounting Practices in Jute Industry", op. cit., p. 136.

CHAPTER - 4

CAPITAL EXPENDITURE DECISIONS AND USE OF ACCOUNTING INFORMATION

4.1 Concepts and Objectives of Capital Expenditure Decisions

Adoption of capital expenditure decisions is the most vital responsibility of top management. The success of an enterprise depends to a great extent on correct and factual data-based decisions regarding major capital expenditure.[1] Financial decisions and control over capital expenditure are also basic to the proper administration of a business. Effects of such decisions and control are permanent, far-reaching and determining factors for success or failure of an enterprise.[2] Probably no other area of financial decision-making is as important to the success of an enterprise as capital expenditure decisions and control.[3] Because capital expenditure decisions involve the commitment of large sums for long periods of time and have a significant and long-term effects on its economic well-being. In practice, all facts of a business are influenced by capital expenditure decisions. Such decisions are likely to have consequences not only on the finance but also on the future overall efficiency and profitability of the enterprise because production, sales, administration, research and development, etc. are all likely to be affected by a single decision like incurring an item of capital expenditure.[4]

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1 CHILDS, JOHN F., "Profit Goals for Management", Financial Executive, Vol. XXXII, February, 1964, p.13.

2 BOGEN, JULES I., Financial Handbook, The Ronald Press Company, New York, 3rd Ed., 1957, p.743.

3 JOHNSON, ROBERT W., Financial Management, Allyn and Bacon, Inc., Boston, 3rd Ed., 1967, p. 163.

4 BATTY, J., Corporate Planning and Budgetary Control, Macdonald and Evans Ltd., London, 1970, p.176.

A capital expenditure is stated as a sum actually spent for construction of a new plant or for the acquisition of new machines and equipments and these sums are the actual costs chargeable to an enterprise's fixed asset accounts for which depreciation accounts are ordinarily maintained.[5] The capital assets of the company are the capital expenditure expected to generate returns over extended periods of time. The purchase of fixed assets for use in a business is a type of investment in capital expenditure. Fixed capital assets consist of relatively permanent assets acquired for use in the conduct of the business and not intended for disposal in the ordinary course of events. Kohler[6] defines the concept of capital expenditure as an expenditure intended to benefit future period - an addition to a capital asset. The term is usually restricted to expenditure that adds fixed asset units or that has the effect of increasing the capacity, efficiency, span of life or economy of operation of an existing fixed assets. Further, it is observed that in its broadest economic sense, capital expenditure includes all outlays expected to produce benefits in the long-run rather than in the current period.[7] Businessmen and accountants usually limit the term to outlays for the fixed assets. A capital expenditure usually gives rise to a fixed asset on the Balance Sheet.[8]

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5 The Economic Almanac, 1962, A Report prepared by the National Bureau of Economic Research, New York, National Industrial Conference Board, Inc, 1962, p.569.

6 KOHLER, ERIC L, A Dictionary for Accountants, Prentice-Hall of India Pvt. Ltd., New Delhi, 5th Ed., 1979, p.74.

7 GUTHMAN, H.G., and DOUGALL, H.E., Corporate Financial Policy, 4th Ed., Prentice Hall Inc., Englewood Cliffs, New Jersey, p.105.

8 JOHNSON, R.W., Financial Management, Allyn and Bacon, Inc., Boston, 4th Ed., p.150.

The concept about the treatment of capital expenditure, viz., preconstruction expenditure, construction expenditure, plant and machinery, and other costs related with projects in nationalised industries was important while using accounting information for decisions and control of such expenditure. The following Table 4.1 exhibits the responses of the samples regarding the treatment of capital expenditure related with different types of projects.

Table - 4.1

Responses of the Samples regarding Treatment of Capital Expenditure vis-a-vis Types of Projects.

Samples / Nature of Capital expenditure and types of projects	Corporation	Enterprises	Total
New Projects	20	25	45 (100)
Modernization, Balancing and Replacement	20	25	45 (100)
Expansion or Additional Capacity	20	25	45 (100)
Quality Improvements	13	13	26 (58)
New Products and By-products	7	9	16 (35)
Cost Reduction	2	4	6 (13)

(Figures in brackets are percentages of total number of samples).

The above Table shows that the above expenditures were treated fully as capital expenditure with regard to the new projects, modernization and replacement, balancing and improvement, and expansion of additional capacity. On the other hand, 58 per cent, 35 per cent and 13 per cent of the samples treated the above expenditures for quality improvement, new products and by-products, and cost reduction as capital expenditure respectively. The study would deal with the above fixed expenditure treated fully as capital expenditure for the new projects, BMR and expansion programme.

From the above analysis, it may be concluded that the distinguishing features of capital expenditures are: (i) the exchange of current funds for future benefits; (ii) the funds are invested in long term activities and (iii) the future benefits occur to the enterprise over a series of years or periods. The objectives of capital expenditure involve not only long range estimates of the inflow of funds but also a realistic estimates of probable and proposed expenditure.[9]

With the discussion of concept of such expenditure, the importance of the use of accounting information for capital expenditure decisions cannot be over-emphasised. It is said that accounting information is so fundamental to the formulation of such decisions that we can not incur any capital expenditure or make any investment in the absence of audited financial statements certified by an independent accounting firm. While considering accounting information generated by a business, a variety of other non-accounting data

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[9] COHEN, J.B. and ROBBINS, S.M., Financial Manager : Basic Aspects of Financial Administration, Harper and Row, Inc., New York, 1966, p. 664.

such as economic data, financial market's information, etc. are also used in reaching capital expenditure and investment decisions.[10] The system of independent audit procedure which has developed in Bangladesh has given the corporate management a framework of reliable data and information. As such for capital expenditure decisions, analysis and acquisitions, accounting information may be widely used.

With the background developed above, the extent of use of accounting information in capital expenditure decisions and control had been investigated in the present chapter. There are three important phases[11] in an industrial enterprise, viz., gestation phase, operating phase, and expansion phase. Gestation phase is related to setting up of a project as well as the procedural aspect of capital expenditure decisions which need to be executed during the period. Here the following aspects of capital expenditure decisions and control related with gestation period has been dealt with:

(i) Capital Expenditure Decision Stages,

(ii) Capital Expenditure Decisions Areas and

(iii) Capital Expenditure Control.

4.2 Capital Expenditure Decision Stages

Management decisions regarding capital expenditure may be divided into two main categories. The first one relates to major decision which covers the size of the overall capital expenditure and the

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10 BURN, T.J. (Ed.), The Use of Accounting Data in Decision Making, op. cit., p.87.

11 SHARMA, B. S., Financial Planning in the Indian Public Sector: A Managerial Approach, op. cit.

allotment of capital to principal parties of the enterprise, divisions, major product lines or new projects. The other category is project decision which, under certain circumstances, is made without much concern for the capital problem of the organisation as a whole. These two categories are tentamount to capital expenditure decisions.

Capital expenditure decisions in case of the selected nationalised industrial enterprises in Bangladesh involve two important categories. The first one relates to the outlay in the establishment of new industrial projects and the other type relates to the outlay of funds in Balancing, Modernization, Replacement (BMR) and Expansion (BMRE) of existing projects. These new projects and BMRE projects are integrated with the Five Year Plans and the Annual Development Plans of the country to portray the overall national economic plan including the capital expenditure or investment decisions of the country. Decisions for setting up the new projects are taken up by the concerned Ministries in consultation with the Planning Commission while decision for BMRE projects are usually taken by the concerned sector corporations.

Regarding the various stages followed in capital expenditure decisions, Table 4.2 shows the responses of the respondents:

Table - 4.2

Responses of the Sample regarding the Stages Followed in Capital Expenditure Decisions

Stages \ Samples	Corporations	Enterprises	Total
Initiation or Preparation of Proposal	13	16	29 (64)
Evaluation (Appraisal and Analysis)	12	16	28 (62)
Implementation	11	14	25 (55)
Financial or Economic Viability	10	7	17 (38)
Commercial Viability	8	7	15 (33)
Technical Viability	9	4	13 (29)
Proper Budgeting for Finance	5	6	11 (24)
Liquidity of the Enterprises	5	2	7 (15)
Approval from Higher Authority	-	6	6 (13)

(Figures in brackets are percentages of total number of samples).

The Table shows that initiation or preparation, evaluation (appraisal and analysis) and implementation of the proposal were the major stages recording 64 per cent, 62 per cent and 55 per cent of the sample opinions respectively. The other stages in order of importance were: financial or economic viability (38 per cent), commercial viability that is, marketability of the proposed products (33 percent), technical viability (29 per cent), proper budgeting for sources of finance and availability of ADP funds (24 per cent),

liquidity of the enterprises (15 per cent) and others such as obtaining approval* from Government as well as corporation's approval of procurement programme against proper justification of the expenditure from the viewpoint of increased production and high profit, and observation of formalities of tender equity (T.E.) and procurement from lower bidder, etc. (13 per cent). Here the first three major stages of capital expenditure decisions and control had been analysed.

It was observed in Table 4.2 that beside three major stages, various stages were followed in capital expenditure decision regarding new project or BMR or expansion programme. Here three major stages viz., formulation, evaluation and implementation,[12] as pointed out by the Planning Commission, had been briefly discussed.

4.2(a) Project Formulation

Under nationalised industries, capital expenditures for a project are sponsored by the concerned sector corporations. After preliminary selection of a project, respective corporation undertakes feasibility study which is conducted both by the local and the foreign consultants. Finally, the project is formulated by the respective

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*Note: For capital expenditure programme at enterprise level other than new projects, BMR or expansion projects, the usual stages were stated as: (i) Capital expenditure budgets at enterprise level are usually prepared by a committee at that level, then it is submitted to the Corporation where Cost and Budget Division scrutinizes the budget and places it before the Board for approval and (ii) if ADP fund is aallowed by Government through the Corporation, then the enterprise local management is required to undertake capital expenditure programme as per requirement of the particular project.

12 Cf. PLANNING COMMISSION, GOVERNMENT OF BANGLADESH, Project Evaluation Proforma, Dacca, June 1973.

sector corporation in the Project Proforma (PP) as approved by the Planning Commission, the Government of Bangladesh. While formulating a project, the following accounting and economic information are taken into due consideration:

(i) Project Profile: It includes names, objectives, estimated cost, location, planned allocation, proposed date of commencement, date of completion of the project, and administrative authorities responsible for initiating, sponsoring, preparing and implementing it.

(ii) Project Description: It includes nature and purpose of the proposed project, its importance to the concerned sector and to the overall economy of the country, physical works and facilities involved, physical targets and other related information such as availability of raw materials, marketing of finished products, etc.

(iii) Cost Estimates Decisions: It covers the total investment cost shown both in local and foreign currencies, annual breakdown of the investment costs and operating costs for gestation period and for the whole life of the project respectively, and budgeted working capital requirements.

(iv) Project Financing: It includes the planned allocation and the sources of finance together with the cost involved in the project.

(v) Benefits of the Project: It embraces the grouping of the project such as self-financing, productive but non-revenue earning and service sector project, the year in which normal capacity output is expected to be reached, economic life of the project, annual value of the output, estimated foreign exchange earnings and other benefits.

(vi) Manpower Requirements: It describes the total manpower requirements both for implementation and operation of the proposed project, and training programme of the project personnel.

(vii) Work Schedule: It covers both physical and financial schedule of work such as purchase and procurement activities of both local and foreign materials and equipments required for the project, yearwise phasing of physical work throughout the investment period, yearwise financial schedule of work during the said period, and so on.

(viii) Project Analysis: This is the last part embracing the economic and financial analyses through benefit-cost ratio and internal rate of return and annual financial rate of return in the year of output reaching normal capacity.

It is observed that the above information and data required for project formulation covered general, economic and accounting sides, of which economic information (that is non-accounting information) outweighed accounting information.

4.2(b) Project Evaluation

A given project is properly evaluated involving two steps: (a) estimation of benefits and costs and (b) selection of an appropriate criteria to judge its desirability or otherwise. The need for evaluation arises mainly from the fact that an industrial project is deemed feasible at the time of appraising but does not always prove itself desirable at subsequent stage. The basic purpose of evaluation is to determine the extent of the divergence between 'estimation' and 'realization'.

Occasional evaluation of an industrial project is necessary to know the effective utilization of the productive factors, to control the efficiency lag and to take corrective measures. Evaluation may lead to the modification and adjustment of the overall industrial plan. It also helps the Government in making future policies and industrial development plan of the country. In Bangladesh, the Board of Directors of the concerned Corporations examines the pros and cons of the proposed project and then it is sent to the concerned Ministry for necessary comments, recommendations and in some cases, for approval too. Projects costing not more than 50 lakh are approved by the concerned Ministry and projects worth above Tk. 50 lakh are sent to the Planning Commission for recommendation and the Planning Commission can approve the project worth between Taka 50 lakhs and 2 crores. Projects costing more than Tk. 2 crores are sent to the Executive Committee of National Economic Council (EC of NEC) for approval.[13] Thus, the EC of NEC is the final approval authority of all the projects, both New and BMR, under nationalised industrial sector, if costs are more than Tk. 2 crores.

The proposed industrial projects are duly evaluated by the approving authorities from the angles of technical, economical and accounting viability.[14] Project evaluation, thus, in its broad

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13 During the pre-liberation days the erstwhile East Pakistan Provincial Planning Authority (PPA) and the Central Executive of National Economic Council (EC of NEC) used to approve the industrial projects. The PPA had the power to approve the projects costing Tk. 50 lakh or less, and the project worth more than Tk. 50 lakh would be approved by the EC of NEC.

14 HELFGOTT, R.B. and SCHIAVO-CAMPO, SALVATORE, "An Introduction to Industrial Planning", Industrialization and Productivity, Bulletin No. 16, United Nations, 1970, p. 27.

concept, includes investment opportunity cost, technical or economic study, market research, financial analysis of relevant non-accounting and accounting information and the calculation of the financial te tests of investment worths.[15]

In the selected industries various techniques[16] were applied for proper evaluation and appraisal of different items of capital expenditure. Responses of the samples as regards the different techniques applied for evaluating capital expenditure on new or BMR projects or expansion programme are presented below:

Table - 4.3

Responses of the Samples regarding Techniques Applied for Capital Expenditure Evaluation.

Techniques for Evaluation / Samples	Corporations	Enterprises	Total
Internal Rate of Return (IRR)	16	12	28 (62)
Return on Investment (ROI)	9	16	25 (55)
Pay Back Method (P/B Method)	12	12	24 (53)
Return on Capital Employed(ROC)	8	12	20 (44)
Benefit-Cost Ratio (B/C Ratio)	5	15	19 (42)
Net Present Value (NPV)	13	5	18 (40)
Situational Benefit Evaluation	Nil	3	3 (3)

(Figures in brackets are percentages of total number of samples).

15 NATIONAL ASSOCIATION OF ACCOUNTANTS, Financial Analysis to Guide Capital Expenditure Decisions, Research Report 43, New York, p.92.

16 Cf. HAQUE, MD. JAHIRUL, "Financial Planning and Control in Public Sector Industries in Bangladesh", Ph.D. Thesis (Unpublished), University of Dacca, Dacca, 1981, p.52.

The techniques used in order of importance were: internal rate of return (62 per cent), return on investment (55 per cent), pay back method (53 per cent), return on capital employed (44 percent), benefit-cost ratio analysis (42 per cent), net present value (40 per cent) and others such as situational-benefit evaluation (7 per cent). Among the techniques, return on investment, internal rate of return, net present value, and return on capital employed were treated as accounting while pay back method, benefit-cost ratio and situational benefit evaluation were treated as non-accounting techniques. It thus appears that accounting techniques were more widely used than non-accounting techniques. Although theoretically,[17] net present value is considered as the best method for evaluation of capital expenditure programme before its implementation, it was observed that in the nationalised industries, internal rate of return was widely practised. After implementation, the financial performancesof any project or capital expenditure programme can best be evaluated through the techniques of return on investment and return on capital employed which were also applied in our nationalised industries.

4.2(c) Project Implementation

After approval of the project, the funds are appropriated for capital expenditures of the project to be executed. In case of the selected nationalised industries the actual implementation of a project would depend on its inclusion in the Annual Development Plan (ADP) and on the availability of funds from the Ministry of Finance and the External Resources Division (ERD). The project sponsoring

17 PAPPAS, J.L. and BRIGHAM, E.F., Managerial Economics, The Dryden Press, Hinsdale, Illinois, 3rd Ed., 1979, p.520.

authority would form a "Project Implmentation Committee" which is composed of the nominees from the Sector Corporation, concerned Ministry and Financial Institutions to ensure that funds are spent in accordance with the appropriations made in the capital budget. The Implementation Committee at this stage, would, for actual implementation of the project, engage consultants for procurement of stores, equipment and machinery for preparation of tender documents and appoint other engineers, contractors, suppliers, etc. Systematic procedures should be developed to monitor the performance of projects during their life and after completion. The follow-up comparison of actual performances with original estimates not only ensures better forecasting but also helps to sharpen the techniques for future forecasts.[18]

4.3 Capital Expenditure Decision Areas

Financial decisions relating to capital expenditure cover the capital expenditure requirement, components of capital structure and nature of financing capital expenditure of the enterprise. Financial decisions are guides to all activities dealing with procuring, administering and disbursing the funds of business firm. However, the long-term financial decisions dealing with capital expenditures include: (i) decisions governing the size of capital required for the investment in the capital expenditure, (ii) decisions guiding the ascertainment of capital structure and (iii) decisions concerning the sources of financing capital expenditure.

[18] PANDEY, I. M., Financial Management, op. cit., p.61.

A brief discussion thereof in the context of the real postion of the nationalised industries in Bangladesh vis-a-vis the use of accounting and non-accounting information for the purpose of capital expenditure decisions had been presented below:

Capital expenditure decisions and control which involved the use of both accounting and non-accounting information, covered many areas for the purposes. As identified by our respondents all such areas were shown in Table 4.4.

Table - 4.4

Responses of the Samples regarding the Capital Expenditure Decision Areas

Areas \ Samples	Corporations	Enterprises	Total
Capital Expenditure Requirements	20	25	45 (100)
Capital Structure	20	25	45 (100)
Capital Expenditure Financing	20	25	45 (100)
Capital Expenditure Control	20	25	45 (100)
Construction of Civil and Engineering Works	8	13	21 (47)
Arrangement of Furniture, fixture and Office Equipments.	5	10	15 (33)
Increasing Productivity and Expenditure for Welfare Purposes	4	8	12 (27)

(Figures in brackets are percentages of total number of samples).

The Table reveals that the important areas like capital expenditure requirements, capital structure, capital expenditure financing and control were taken into consideration by all the respondents (100 percent). Other areas of capital expenditure decisions and control reported by 47 per cent, 33 percent, and 27 percent of the samples were: construction of civil and engineering works, arrangement of furniture, fixture, office equipments, etc. and increasing productivity as well as expenditure for welfare purposes respectively. In the present study, the important areas of capital expenditure decisions and control which were fully considered, had been examined in the context of use of accounting and non-accounting information.

Both accounting and non-accounting information were used for various areas of capital expenditure decisions in the nationalised industries. Table 4.5 exhibits the responses of the samples regarding the types of accounting and non-accounting information:

Table - 4.5

Responses of the Samples regarding the Types of Information Used for Capital Expenditure Decisions

Types of Information \ Samples		Corporations	Enterprises	Total	
Accounting Information	Accounting Data from Financial Statements of Existing Enterprises	8	13	21	(47)
	Accounting Data from Financial Statements of Similar Types of Enterprises	8	12	20	(44)
	Others:(Auditors' Reports, Newspaper Reports etc.)	4	6	10	(22)
Non-Accounting Information	Market Information	18	19	37	(82)
	Government Statistics	16	14	30	(67)
	Economic Data	15	11	26	(58)
	Others: (MIS Reports)	4	5	9	(20)

(Figures in the brackets are percentages of total number of samples).

Table 4.5 shows that the types of accounting and non-accounting information used in order of importance and it is evident that the accounting information were less used than non-accounting information for various areas of capital expenditure decisions and control.

Basing on Table 4.5, the responses of the samples regarding the extent of accounting and non-accounting information used in capital expenditure decision are shown in Table 4.6.

Table - 4.6

Responses of the Samples regarding the Extent of Use of Accounting and Non-Accounting Information in Capital Expenditure Decisions.

Types of Information / Levels of Use	Accounting	Non-Accounting	Total	Level of Significance
Corporations	20 (27)	53 (73)	73 (100)	Chi-Square: 2.21
Enterprises	31 (39)	49 (61)	80 (100)	Not Significant at .05 level
Total :	51 (33)	102 (67)	153 (100)	

(Figures in brackets are column percentages).

Thus, 67 per cent of the samples viewed the types of the information used in capital expenditure decisions as related to non-accounting (such as economic data, Government statistics, market information, MIS reports, etc.) while 33 per cent of them viewed those as related to accounting (such as accounting data from financial statements, reports, etc. of similar and existing types of enterprises). Of the samples at corporation level, 73 per cent and 27 per cent perceived those as related to non-accounting and accounting information respectively. On the other hand, of the enterprise heads, 61 per cent and 39 per cent perceived those as related to non-accounting and accounting information respectively.

Out of the samples who viewed the types of information used as non-accounting, 52 per cent and 48 per cent belonged to the categories of corporations' samples and enterprise heads respectively while out of the samples who viewed the types of information use as related

to accounting, 61 per cent and 39 per cent belonged to the categories of enterprise heads and corporations' heads respectively.

It is thus evident that there had been wide use of non-accounting information in capital expenditure decisions both at corporation and enterprise levels. But there was no significant relationship between the extent of use of non-accounting information and the levels of use (not significant at .05 level). That is, the opinion variation as regards the extent of use of non-accounting and accounting information in capital expenditure decisions and control in selected nationalised industries was independent of the variations in the levels of such use.

4.3(a) Capital Expenditure Requirements Decision

In Bangladesh, the Project Proforma shows the investment cost of the nationalised industrial enterprises and an analysis of the same of the selected industrial enterprises reveals the major components of capital expenditure of both New and BMR projects as:

i. Pre-construction Expenditure, viz., advance expenditure, land acquisition, land development, site development, right of way and others;

ii. Construction Expenditure, viz., administrative and residential buildings, roads, access and drainage, and construction works such as garrage, generator room, dormitory, gate house and boundary wall;

iii. Expenditure for Machinery and Equipment, viz., both imported and local machineries and equipments, current and fixed cost or ex-factory cost including duties, taxes, transportation expenses, etc. and

iv. Other Costs namely, installation expenditure, overhead of sponsoring agency and project, interest charges, allowances for unforeseen cost, working capital et cetra.

In order to investigate the use of accounting and non-accounting information and data in decisions on original requirements of total capital expenditure of 74 enterprises established during the period 1951/52 - 1971/72 under the selected nationalised industries, the Table 4.7 has been presented below.

Table - 4.7

Decision on Original Requirements of Total Capital Expenditure (Elemen
74 Enterprises Estd. (by PIDC/EPIDC/BIDC) During the Period 1951/52-19
the Selected Nationalised Industries (formerly under Public Sector).

(Amount in Mill

Selected Industries / Major Elements of Capital Expenditure	Jute		Cotton		Sugar & Food		Steel and Engineering		Chemical Fertili
	1000 units capacity	%	1000 units capacity	%	1000 units capacity	%	1000 Units capacity	%	1000 Units capacity
Pre-Construction Expenditure	0.56	1.51	0.01	1.51	0.03	1.68	0.03	1.45	0.02
Construction Expenditure	14.53	39.10	0.25	37.88	0.65	36.52	0.64	30.92	0.35
Machinery & Equipments	16.94	45.58	0.31	46.97	0.84	47.20	1.10	53.14	0.60
Other Costs	5.13	13.81	0.09	13.64	0.26	14.60	0.30	14.49	0.21
Total :	37.16	100.00	0.66	100.00	1.78	100.00	2.07	100.00	1.18

Source: Appendix I (A): (Based on BIDC in Figures).

The above Table shows the total capacity-wise capital expenditure requirements classified into four major elements, capital expenditure requirements of 1000 units capacity and percentage-wise allocations of such requirements among the given enterprises. Such capital expenditure requirements and allocation thereof into elements-wise, being the major financial decisions of the public sector industries were determined on the basis of actual cost of similar projects, local markets rates, economic trends and rough estimates in the case of 'pre-construction' and 'construction expenditure' items while international market situations, international informal inquiry, etc., were considered in case of 'machinery and equipments' imported from outside the country. Among the identified elements, the requirements for 'construction expenditure' and 'machinery and equipment' were higher as compared to other items ranging from 29.66 per cent to 39.10 percent and 45.58 per cent respectively. Then in determination of such requirements and allocations in the items like 'machinery and equipment, heavy industries, viz., Steel and Engineering, and Chimical and Fertilizer used more international rough inquiry and market situation information (ranging from 53.14 per cent and 50.85 per cent) than from less heavy industries viz., Jute, Cotton and Sugar (ranging from 45.58 per cent, 46.97 per cent and 47.20 per cent).

In the like manner, the decisions for original requirements of the major elements of capital expenditure of 14 enterprises established during the period 1972/73-1981/82, under the selected industries have been presented in Table 4.8.

Table - 4.8

Decision on Original Requirements of Total Capital Expenditure (Element
14 Enterprises Established during the Period, 1972/73 - 1981-82 under
Selected Nationalised Industries.

(Amount in Millio

Major Elements of Capital Expenditure \ Selected Industries	Jute		Cotton Textile		Sugar and Food		Steel and Engineering		Chemica Fertili
	1000 units capacity	%	1000 units capacity	%	1000 units capacity	%	1000 units capacity	%	1000 units capaci
Pre-construction Expenditure.	0.004	1.76	0.045	1.44	0.168	3.36	0.35	1.59	0.09
Construction Expenditure	0.085	37.44	0.496	15.88	0.597	11.95	6.72	30.61	1.99
Machinery and Equipments	0.109	48.02	2.001	64.07	2.238	44.82	12.25	55.82	3.50
Other Costs	0.029	12.78	0.581	18.61	1.991	39.87	2.63	11.98	0.72
Total :	0.227	100.00	3.123	100.00	4.994	100.00	21.95	100.00	6.30

Sources Appendix I:(B) (Based on Respective Project Proforma).

The said Table also shows the total capacitywise capital expenditure requirements classified into four major elements, capital expenditure requirements of 1000 units capacity and percentage allocation of such requirements of the above enterprises. Various factors like actual cost of similar projects, local international market situations, departmental rough estimates, assumptions, etc. were also considered for deciding the capital expenditure requirements of these enterprises. Among the major elements, the requirements for 'machinery and equipments' recorded the highest percentage randing from 44.82 per cent to 64.07 per cent signifying the use of international market sitiations and enquiries. In the case of the above-noted industrial enterprises, the other noticeable feature is that an element, viz. "other costs" also absorbed reasonable allocations ranging from 11.43 per cent to 39.87 per cent signifying the use of actual cost, departmental rough estimate, percentage, assumption, fixed averages and lumpsums as the bases for deciding the requirements of such an element of capital expenditure.

It was also observed that one of the less heavy industries viz. Cotton Textile recorded the highest percentage (64.07) in respect to its allocation of original requirements in 'machinery and equipments' as compared to heavy industries, viz. Steel and Engineering and Chemical and Fertilizer recording 55.82 per cent and 55.55 per cent respectively. Thus, from the above analysis it is evident that non-accounting information, viz. international market situations and enquiries, departmental rough estimates, assumption, fixed averages, etc. had been more used than the accounting information (viz. actual

cost of similar projects) for decisions in capital expenditure requirements (element-wise) of such enterprises under the selected industries.

There are various accounting and non-accounting factors which were taken into consideration as the bases for cost estimates of capital expenditure of the enterprises set-up during the period 1972/73 to 1981/82 which are depicted in the Table 4.9.

Table - 4.9

Responses of the Samples regarding the Basis for Cost Estimates of Capital Expenditure (Item-wise) of Projects Established during the Period 1972/73 to 1981/82 under the Selected Nationalised Industries

Basis / Capital Expenditure Items	Actual Cost (AC)	International Informal Equity (IIE)	Dept. Rough Estimate (DRE)	Percentage (PC)	Assumption (AS)	Fixed Average (FA)	Lumpsum (LS)	Others	Total
Pre-Construction Expenditure	5		3						8 (14%)
Construction Expenditure	3		3						6 (11%)
Machinery & Equipments	4	9	3						16 (29%)
Other Costs	5		6	7	6	2	1		26 (46%)
Total :	17 (30%)	9 (16%)	15 (27%)	7 (12%)	5 (9%0	2 (4%)	1 (2%)	-	56 (100%)

The factors as evident from the same Table are actual cost, international formal enquiry, departmental rough estimate, percentages, fixed averages, lumpsums, etc. For deciding the cost requirements of machinery

and equipment, international informal enquiry had been greatly used recording 16 per cent as the basis for decision. It is evident from the Table that actual cost and departmental rough estimates recording 30 per cent and 27 per cent respectively were widely/highly used as the basis for determining the capital expenditure requirement. For estimates of an element 'other costs', different bases, viz. actual cost (5%), departmental rough estimates (6%), percentage of proportion (7%), assumption, fixed averages and lumpsum at varying rates had been adopted for the purpose. Accounting information like actual cost treated as historical cost of major capital elements of other similar projects had been adopted here as the basis for deciding capital expenditure requirements to the extent of 30 per cent and other non-accounting factors record 70 per cent.

It is thus evident that non-accounting information had been more used than accounting information as the basis for cost determination of the capital expenditure requirements and that the extent of use of accounting information is 30 per cent and that of non-accounting information is 70 per cent.

Besides the bases or factors considered capital expenditure requirements as mentioned in Project Proforma and Official Records of the selected sector corporations, we were also interested to know from our respondents as to what other factors were taken into consideration in this regard. Further, it may also be mentioned here that the bases or factors mentioned in Table 4.9 covered only the capital expenditure requirements of new projects or BMR or Expansion programme, but the responses of the samples in this regard

also covered the cost estimates of capital expenditure other than new project or BMR or Expansion Programme.

The following Table 4.10 shows the various bases or factors which are taken into account while initiating and implementing capital expenditure programme.

Table - 4.10

Responses of the Samples regarding the Bases or Factors for Deciding Capital Expenditure Requirements

Bases \ Samples	Corporations	Enterprises	Total
Future Profitability	9	11	20 (44)
Social Consideration	11	8	19 (42)
Financial and Economic Viability	7	8	15 (33)
Cost of Acquiring Land, Land Development, Building, Machineries, Plants, etc.	10	4	14 (31)
Cost-benefit Ratio	8	5	13 (29)
Technical Viability	9	3	12 (27)
Sources and Availability of Foreign and Local Funds	9	2	11 (24)
Existing and Similar Enterprises Financial Statements/ Reports	5	5	10 (22)
Consideration of Changes in Foreign Exchange Rates	5	3	8 (18)
Others: Cost of Trial Production, Last purchase Rate, Approved Capital Budget, etc.	Nil	4	4 (9)

(Figures in brackets are percentages of total number of samples).

Among the various bases/factors as identified in the above Table by the respondents for deciding capital expenditure, financial reports of existing or similar enterprises, future profitability, cost of land, building and machinery and revenue expenses and cost of trial production were classified as accounting factors while the remaining factors/bases were treated as non-accounting ones. It thus appears that non-accounting factors were highly taken into consideration for deciding capital expenditure. It is observed that out ofmany factors, existing and similar enterprises' financial reports and data were considered while adopting capital expenditure decisions and control.

Based on Table 4.10, the responses of the samples as regards the various bases or factors which are taken into consideration while making capital expenditure decisions, the bases or factors being identified as accounting and non-accounting aspects are shown in the following Table 4.11.

Table - 4.11

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Bases for Capital Expenditure Requirements Decision

Bases / Levels of Use	Accounting	Non-Accounting	Total	Level of Significance
Corporation	24 (31)	54 (69)	78 (100)	Chi-square = 1.844
Enterprises	24 (42)	33 (58)	57 (100)	Not Significant at .05 level.
Total :	48 (36)	87 (64)	135 (100)	

(Figures in brackets are column percentages).

From the above Table it is clear that 64 per cent of the samples perceived the bases or factors considered in making capital expenditure decisions as related to non-accounting aspects while 36 per cent of them perceived the same bases/factors as related to accounting aspects. Of the samples at corporation level, 69 per cent and 31 per cent perceived the bases/factors as related to non-accounting and accounting aspects respectively on the otherhand, of the enterprise heads, 58 per cent and 42 per cent also perceived the same bases/factors as related to non-accounting and accounting aspects respectively. Then, of the samples who viewed the bases/factors as related to non-accounting, 62 per cent and 38 per cent belonged to the categories of corporations samples and enterprise heads while of the samples who viewed the bases/factors as related to accounting, 50 per cent belonged to each category.

It is thus evident that factors/bases considered in making capital expenditure decisions were mostly related to non-accounting aspects of both corporations and enterprise levels. Moreover, there was no significant relationship between the extent of of non-accounting bases/factors in capital expenditure decisions and the levels of use (not significant at .05 level), That is, the opinion variation as regards the extent of use of accounting and non-accounting bases/factors considered while making capital expenditure requirements decision in nationalised industries was independent of the variations in the levels of such use resulting in over-capitalization involving unfavourable input-output ratio. The causes leading to over capitalization may be traced to inaccurate and hunch-based estimates, delays and avoidable expenditure during construction,

surplus installed capacity, compulsion to purchase imported equipment on a non-competitive basis under foreign collaboration agreements, expensive turn-key contracts, bad location of projects, provision of housing and other social amenities on a liberal scale.[19]

4.3(b) Capital Structure Decision

Capital expenditure decisions are also related to capital structure which is included in the long-term financial decisions of the organization. Deciding optimum capital structure is a major top management responsibility and a stupendous task requiring as it does an objective consideration of a wide range of complex factors that vary significantly among industrial enterprises, some of which fall beyond the parameters of theory.[20] Capital structure of a firm may be defined as the sum total of its equity capital and long-term debts. Various authors have defined the term capital structure in various ways. Bierman and Smidt[21] says that the capital structure is the relative proportion of the various kinds of securities a company has used. Guthman and Dougall[22] are of the same opinion. While Taylor[23] opines about the term as the total of outstanding

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19 KUCHHAL, S.C., Corporation Finance : Principles and Problems, Chaitanya Publishing House, Allahabad, 1979, p.501.

20 PANDEY, I.M., "Financial Decision-Making : A Survey of Management Understanding", Indian Management, New Delhi, January, 1984, p.21.

21 BIERMAN, HAROLD (Jr.) and SMIDT, SEYMOUR, The Capital Budgeting Decision, Macmillan Co., New York, 3rd Ed., 1971, pp. 165-166.

22 GUTHMAN, H.G. and DOUGALL, H.E., Corporate Financial Policy, 4th Ed., Prentice Hall Inc., Englewood Cliffs, New Jersey, pp. 213-216.

23 TAYLOR, W. BAYORD, Financial Policies of Business Enterprises, 2nd Ed. Appleton-Century, Crofts, New York, p.219.

long-term securities, both equity and debt. Vanhorne[24] also holds the same opinion. Weston and Brigham[25] define the term as the permanent financing of the firm represented by long-term debt plus preferred stock and net worth. If we have a close look into these definitions, it reveals that each author has expressed the term in relation to equity and debt. As such, for the purpose of the study, capital structure had been taken as the total equity and long-term debt representing the permanent source of financing the capital expenditure. Therefore, the capital structure decision covers the determination of different forms of long-term securities viz., equity, capital, preferred capital and long-term debt capital.

Much has been written on the topic of capital structure decision i.e. the debt-equity ratio of the enterprise. The literature of finance is full of detailed analysis of the corporate financing decision with regard to the optional mix of debt and equity[26] and the problem that arises here is the choice between equity and.[27]

Though both the equity and the debt capital have distinct advantages[28] to the firm, yet the capital structure decision becomes the outcome of conflicting opinions and tendencies. Of course, the main problem in this respect is not the choice between debt and

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24 VANHORNE, JAMES C., Financial Management and Policy, Prentice-Hall of India, Private Limited, New Delhi, 1976, p.144.

25 WESTON, J.ERED and BRIGHAM, F. EUGENE, Managerial Finance, op. cit., pp.253-254.

26 MORRIS, JAMES R., "On Corporate Maturity Strategies" Journal of Finance, Vol. XXXI, No. 1, March 1976, p.29.

27 WALKER, ERNEST W. and BAUGHAN, WILLIAM H., Financial Planning and Policy, op. cit., p.107.

28 Ibid., pp. 108-109.

equity but the decision of correct proportion. Wilson has narrated main five influencing factors to be considered in making such decision as:[29] (i) nature and requirement of the individual enterprises, (ii) relative costs; (iii) relative risks, (iv) relative returns and (v) availability of funds. Therefore, the appropriate proportion of debt and equity capital of an enterprise might be determined after considering all the above factors. One author in this context, observes in a study that the firm should bass their stock and bond issue decision on the requirements for permanent capital expenditure and on their long-term debt capacity.[30]

Since the importance of maintaining the proper and accurate debt-equity ratio has been recognized as an important part and parcel of capital expenditure decisions, any wrong determination or decision thereof (of the ratio) tends to escalate the losses or decrease the profits earned by the enterprise.[31] Realizing the importance, some authors[32] are of the opinion that the debt-equity ratio should be based not on the arbitrary decision but on the project risk characristics and actual accounting information of similar projects. Not withstanding the above facts the Controller of Capital Issues had prescribed 50:50 debt-equity ratio as the capital structure for the industrial enterprises under the selected industries before and after ther nationalisation in Bangladesh.

In order to show the decision on structural components of capital of 74 enterprises at their initial period 1951/52 to 1971/72 and that of 14 enterprises established during 1972/73 to 1981-82, the following Table 12 has been presented.

29 WILSON, R.M.S., Financial Control : A Systems Approach, McGraw-Hill Book Company (UK) Ltd., London, 1974, p.214.

30 TAGGART (JR), "A Model of Corporate Financing Decision", Journal of Finance, Vol. XXXII, No. 5, November 1977, p.1467.

31 MATHUR, B.P., "Public Enterprises in Perspective: Aspects of Financial Administration and Control in India, Ph.D. Thesis, Orient Longman Ltd, New Delhi, 1973, p.138.

32 MYERS, S.C. and POGUE, G.A., "A Programming Approach to Corporate Financial Management," Journal of Finance, Vol. XXIX, No. May 1974, p.598.

Table - 4.12

Decision on (or Comparative Position of) Structural Components of Capital of the Enterprises at the Initial Period under the Selected Nationalised Industries

(In Million Taka and %)

Selected Industries	Structural Components of Capital of 74 Enterprises at the Initial Period during 1951/52-1971/72			Structural Components of Capital of 14 Enterprises at the Initial period during 1972/73-1981/82		
	Equity Capital (Amount and %)	Debt Capital (Amount and %)	Total (Act. Cost) (Amount & %)	Equity Capital	Debt Capital (Long-term loan)	Total (Act. cost) (Amount & %)
Jute	377 (54)	316 (46)	693 (100)	92 (30)	213 (70)	305 (100)
Cotton Textile	20 (56)	16 (44)	36 (100)	360 (51)	346 (49)	706 (100)
Sugar & Food	126 (49)	132 (51)	258 (100)	36 (45)	45 (55)	81 (100)
Steel and Engineering	430 (55)	355 (45)	785 (100)	95 (20)	379 (80)	474 (100)
Chemical and Fertilizer	416 (36)	724 (64)	1140 (100)	3074 (45)	3757 (55)	6831 (100)
Total :	1369 (47)	1543 (53)	2912 (100)	3657 (44)	4740 (56)	8397 (100)

Source : Based on Tables : 4.13 and 4.14

Notes : i. Figures in the parentheses refer to percentage-wise position and

ii. The average position of equity and debt capital for periods as referred is shown.

It is observed from the Table that in both the periods actual structural components did not conform to the decided ratio since the equity-debt ratio, on an average, of the enterprises during their period of establishment 1951/52 to 1971/72 and that of the enterprises set up during the period 1972/73 to 1981/82 were 47:53 and 44:56 respectively showing more reliance on debt capital in the post liberation period.

The ratio was most disproportionate in the case of Chemical and Fertilizer Industry at 36:74 in the initial period of 1951/52 to 1971/72 and in Jute and Steel and Engineering Industries at 30:70 and 20:80, almost favourable structural components position in the case of remaining industries at both the said periods. The important reasons for the above-mentioned disproportionate ratio might be the arbitrary decision of structural components of capital at 50:50 taken by the concerned authority not based on the accounting but on economic factors.

Then a comparative picture of the structural components of capital of the 74 enterprises during the period of their establishment 1951/52 to 1971/72 and that of 245 enterprises during their operating period covering 1975/76 to 1979/80 has been presented below in Table Table 4.13.

Table - 13

Decision on (or Changes in the Position of) Structural Components of Capital of the Enterprises during their Operating Period as Compared to Initial Period under the Selected Nationalised Industries

(In Million Taka and %)

Selected Industries	Structural Components of Capital of 74 Enterprises During their Initial Period 1951/52 - 1971/72			Structural Components of Capital of 245 Enterprises during their Operating Period 1972/73 - 1981/82		
	Equity Capital (Amount & %)	Debt Capital (Amount and %)	Total (Amount & %)	Equity Capital (Amount & %)	Debt Capital (Amount and %)	Total (Amount and %)
Jute	377 (54)	316 (46)	693 (100)	684 (18)	3173 (82)	3857 (100)
Cotton Textile	20 (56)	16 (44)	36 (100)	191 (26)	534 (74)	725 (100)
Sugar and Food	126 (49)	132 (51)	258 (100)	269 (36)	478 (64)	747 (100)
Steel and Engineering	430 (55)	355 (45)	785 (100)	175 (16)	857 (84)	1032 (100)
Chemical and Fertilizer	416 (36)	724 (64)	1140 (100)	644 (23)	2130 (77)	2774 (100)
Total :	1369 (47)	1543 (53)	2912 (100)	1963 (21)	7172 (79)	9135 (100)

Source : For capital structure of 245, see Appendix 11(A) to 11(F):
Based on B/S and P/L Items from Annual Reports and Performance Reports.

It is also evident from the above Table that the capital structure of both groups of enterprises at both the periods varied from the prescribed structure and the ratio on the average, for all industries was 21:79 at the operating period as against 47:53 during the initial period. Morecver, there was highly disproportionate ratio in capital structural components of the enterprises under all selected industries during their operating period, viz., 18:82 for Jute, 26:74 for Cotton, 36:64 for Sugar and Food, 16:84 for Steel and Enginaering and 23:77 for Chemical and Fertilizer Industries. This resulted in a very high ratio of debt capital as against equity capital for all the industries. The main reason for this disproportionate rate might be identified as use of non-accounting and economic information in decisions of structural components of the enterprises by the concerned authority. Variation in exchange rate might in foreign currency and paucity of domestic capital or inability to make arrangement for domestic capital might be the reasons for reliance on debt capital. The ultimate result is the big amount of interest to be charged on the long term debt capital thus affecting the very profitability of the industries to a great extent.

4.3(c) Capital Expenditure Financing Decision

Long-term financial policies and decisions also embrace the issues related to capital expenditure financing. Here the most important choice in business financing is the relative

proportion of the firm's total finance which is to be raised in the form of equity and debt. Since the industrial enterprises in Bangladesh had been of capital dependent type, they had to use both the local currency as well as foreign currency for the capital expenditure of the projects. The local and foreign currency cost of the capital expenditure of the projects were met out of equity and borrowed capital supplied by the Government and the financial institutions of the country.

The following Table 4.14 has been presented to examine the decisions on financing the capital expenditure (both estimates and actual) of 74 enterprises during their initial period of establishment 1951/52 to 1971/72 under the selected industries.

Table - 4.14

Decision on Financing Capital Expenditure Requirements (Original and Actual) OF 74 Enterprises During Their Ge
1951/52-1971/72 under the Selected Nationalised Industries (Formerly under Public Industries Sector)

Selected Industries	No. of Pro-jects	Total Costs of the Enterprises		Expenditure in Local Currency								Expenditure		
				Government Finance				Institutional Finance				Government Finan		
		Origi-nal	Actual	Equity Capital		Debt Capital		Equity Capital		Debt Capital		Equity Capital		Debt C
				Origi-nal	Actual	Origi-nal	Actual	Origi-nal	Actual	Origi-nal	Actual	Origi-nal	Actual	Origi-nal
Jute	40	620	693	120	134	-	-	128	143	-	-	-	-	60
Cotton Textile	3	32	36	9	10	-	-	4	5	-	-	-	-	-
Sugar and Food	12	213	258	100	120	-	-	5	6	16	20	-	-	-
Steel and Engineering	8	601	785	270	350	-	-	-	-	-	-	23	30	-
Chemical and Fertilizer	11	726	1141	220	347	-	-	-	-	135	213	45	70	-
Total :	74	2192	2913	719	961	-	-	137	154	151	233	68	100	60

[Sources : i. EPIDC, Annual Reports, 1969-70, Dacca, 1971,
ii. Articles of Association of Selected Enterprises and
iii. Ministry of Economic Affairs, Govt. of Pakistan, Development Projects. Manager of Publications, Ka

[Based on: Appendix V(A).]

The decision to finance the original total cost of the capital expenditure was Tk. 2,192 million out of which the equity capital was Tk. 1,056 million and the debt capital was Tk. 1,136 million recording 48 percent and 52 per cent respectively. As against this decision, the total actual cost of the enterprises was Tk. 2,913 million out of which equity capital was Tk. 1,370 million and the debt capital was Tk. 1,543 million recording 47 per cent and 53 per cent respectively. Though the quantum of actual cost increased by Tk. 721 million, the proportion of structural components was almost same. Then, both the original and the actual total costs of the enterprises were financed both by Government and financial institutions. Out of the total original cost of the enterprises, the expenditure in local and foreign currency was Tk. 1,007 million and Tk. 1,185 million bearing 46 per cent and 54 per cent respectively. On the other hand, out of the total actual cost of the enterprises, the expenditure in local and foreign currency was Tk. 1,348 million and Tk. 1,565 million recording 45 per cent and 55 per cent respectively. Such position claims the importance of foreign currency in the development of industries in Bangladesh.

Out of the total currency of original cost of Tk. 1,007 million, Government and institutional equity were Tk. 719 million and Tk. 137 million
/recording 71 per cent and 13 per cent respectively. On the other hand, out of the total local currency of actual cost of Tk. 1348 million, Government and institutional equity were Tk. 961 and Tk. 154 million recording 71 per cent and 11 per cent respectively.

Again, out of the total foreign currency of original cost of Tk. 1,185 million, Government and institutional equity were Tk. 100 million and Tk. 155 million recording 6 per cent and 10 per cent only respectively. Thus, it indicates that almost 90 per cent of foreign currency was financed by institutional debt capital. As such, the Government should provide more equity capital to finance the capital expenditure of the projects.

In order to examine the decisions on financing the capital expenditure (both original and actual) of 14 enterprises established during the period 1972/73 to 1982/83 under the selected nationalised industries, the Table 4.15 has been presented below:

Table - 4.15

Decision on Financing Capital Expenditure (Original and Actual) of 14 Enterprises During Their Initi
1972-80 under the Selected Nationalised Industries

Selected Industries (Corp.-wise)	Total Cost of the Enterprises		Expenditure in Local Currency								Expendi		
			Government Finance				Institutional Finance				Government Fin		
			Equity Capital		Debt Capital		Equity Capital		Debt Capital		Equity Capita		De
	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Ori na
Jute	274	305	82	92	72	80	-	-	-	-	-	-	1
Cotton Textile	428	706	179	298	44	71	-	-	32	52	-	-	
Sugar and Food	33	81	10	25	6	14	-	-	3	8	-	-	
Steel and Engineering	220	474	117	252	-	-	-	-	-	-	-	-	
Chemical and Fertilizer	3369	6831	-	-	2181	4427	-	-	-	-	-	-	11
Total :	4324	8397	388	667	2303	4587	-	-	35	60	-	-	1

[Source : Project Proforma of the Enterprise under Study.]

In order to finance the total capital expenditure of the enterprises noted above, the original decision was Tk. 4,324 million out of which the equity capital was Tk. 388 million and the debt capital was Tk. 3,936 million recording 9 per cent and 91 per cent respectively. On the other hand, the total actual capital expenditure of these enterprises was Tk. 8,397 million out of which the equity capital was Tk. 667 million and Tk. 7,730 million accounting for 8 per cent and 92 per cent respectively. In the case of these enterprises also, the actual capital expenditure increased by Tk. 4,073 million the amount being almost double the original estimates, but the ratio of the structural components almost remaining the same.

Of the total original cost, the expenditure in local and foreign currency was Tk. 2,726 million and Tk. 1,598 million recording 63 per cent and 37 per cent respectively. On the other hand, out of the total actual cost of the enterprises, the expenditure in local and foreign currency was Tk. 5,314 million and Tk. 3,083 million accounting for 64 per cent and 36 per cent respectively. Such position indicates the importance of local currency in the industrial development of Bangladesh.

Of the total local currency of original cost of Tk. 2,726 million, the Government equity was Tk. 388 million bearing 14 percent with no institutional equity and the Government and the institutional debt capital were Tk. 2,303 million and Tk. 35 million recording 84 per cent and 2 per cent respectively. It thus indicates that the local currency was expected to be financed mostly (84 per cent) by the Government debt capital. On the other hand, out of the total local

currency of actual cost of Tk. 5,314 million, Government equity was Tk. 667 million bearing 13 per cent while the Government and the institutional debt capital were Tk. 4,587 million and Tk. 60 million recording 86 per cent and 1 per cent respectively. It is therefore evident that actual local currency was lavishly (86 per cent) supplied by Government debt capital.

Again, out of the total foreign currency of original cost of Tk. 1,598 million, there was no Government and institutional equity capital while the Government and institutional debt capital was Tk. 1,500 million and Tk. 98 million recording 94 per cent and 6 per cent respectively. On the other hand, of the total foreign currency of actual cost of Tk. 3,083 million, there was also no Government and institutional equity capital while the Government and institutional debt capital Tk. 2,915 million and Tk. 168 million recording 95 per cent and 5 per cent respectively. Thus, it is evident that 95 per cent of foreign currency was financed by Government debt capital. As such, the Government provided more debt capital than equity capital to finance the capital expenditure of the enterprises under the selected industries. A reverse situation should have been better for the enterprises under consideration as it would have reduced their interest burden in respect of debt capital.

It has been observed that during their operating period, the gross fixed assets of 245 enterprises under selected nationalised industries were financed by equity capital, debt capital and other source. The following Table 4.16 shows decision on financing position of gross fixed assets of these enterprises for the period, 1975-76 to 1979-80.

Table - 4.16

Decision on Financing of the Gross Fixed Assets of 245 Enterprises During Their Operating Period, 1975/76 under the Selected Nationalised Industries

Selected Industries	No. of Projects	1975-76		1976-77		1977-78		1978-79		19
		Equity Capital	Debt Capital	Equity Capital	Debt Capital	Equity Capital	Debt Capital	Equity Capital	Debt Capital	Equity Capital
te	75	2856= 491(17)	2365(83)	2781= 30(1)	2751(99)	3014= Nil	3014(100)	3163= 475(15)	2688(85)	3347= 6
tton xtile	59	801= 223(28) others	225(28) 357(44)	827= 207(25) others	180(22) 440(53)	1120= 169(15) others	481 (43) 470 (42)	1594= 398(25) others	558(35) 638(40)	1524= 3
gar and od	43	665= 245 (37)	420(63)	668= 246(37)	422(63)	740= 257(35) others	455(61) 28(4)	880= 352(40)	528(60)	903= 3
eel and gineering	38	964= 188(20)	776(80)	978= 118(12)	860(88)	996= 184(19)	812(81)	638= 134(21)	504(79)	642= 1
emical and rtilizer	30	2534= 137(6) others	2312(91) 85(3)	3248= 455(14) others	2713(83) 80(3)	3400=1600(47)	1800(53)	3886=1360(35)	2526(65)	3927=b
tal :	245	7824=1284(16)	6098(78) 442(6)	8502=1056(12)	6926(82) 520(6)	9270=2210(24)	6562(71) 498(5)	10161=2719(27)	6804(67) 638(6)	10343=28

urce: Based on data presented in Appendix 11(A) to 11(F) based on B/S & P/L Items from Annual Reports, Financial Statement, Selected Industries for the study period.

tes : (i) Other sources include internal sources generated through depreciation, retained earnings and short-term debts

(ii) Figures in the parentheses indicate ratio of each source to total gross fixed assets, expressed in percentages.

The gross fixed assets of all the industries on an average, were financed during the period 1975-76 to 1979-80 by equity capital at 21.2 per cent, debt capital at 72.6 per cent and other sources* by 6.2 per cent. In all industries other than Cotton Textile, the gross fixed assets were largely financed by the debt capital. During the study period, the Jute Industry was financed by debt capital to the extent of 82 per cent to 100 per cent, Sugar and Food Industry to the extent of 60 per cent to 63 per cent, Steel and Engineering to the extent of 78 per cent to 88 per cent and Chemical and Fertilizer to the extent of 53 per cent to 91 per cent, while in the Cotton Textile Industry, the gross fixed assets were financed to the extent of 22 per cent to 43 per cent by debt capital. Thus, it is evident that all the industries under study except Cotton Textile Industry, used debt capital than equity capital and switched over from equity to debt capital to finance the gross fixed assets during the operating period. The decision of such financing picture might have adverse effects on the profitability of the concerns under study.

A comparative study of the above Tables 4.15 and 4.16 stating the financing position of the enterprises during their initial and operating periods reveals that in all the industries except Cotton Textile, the gross fixed assets were largely financed by the equity capital (both Government and institutional) and the debt capital during their initial period and operating period respectively. It is evident that on an average, debt capital financed 89.8 per cent of gross fixed assets during the operating period as against 45.6

(*Note: Other Sources comprise internal resources, viz. depreciation, retained earnings, short-term debts, etc.)

per cent in the initial period in Jute Industry; in Sugar and Food Industry it financed 61.4 per cent of these assets during the operating period as against 51.2 per cent in the initial period; in Steel and Engineering Industry it financed 81.2 per cent of these assets during the operating period as against 45.2 per cent in the initial period and in Chemical and Fertilizer Industry it financed 70.4 per cent in these assets during the operating period as against 63.4 per cent in the initial period. It thus indicates that the selected industries acquired excessive institutional finance during the operating period to finance their gross fixed assets thereby affecting the very profitability of the industries by the large amount of interest charges paid for the borrowed capital.

4.3(d) Capital Expenditure Control

Capital expenditure decisions are followed by evaluation and control which is an integral part of total capital expenditure programme. The aim of capital expenditure evaluation and control is to attain the target within the time and resource constraints or to bring to light variation for corrective action. All expenditure may be strictly controlled so as to conform to the budget.

In order to make capital expenditure decisions effective, certain forms are used at the implementation stages of such decisions. The following Table 4.17 shows the responses of the samples regarding the various types of forms used for making capital expenditure decisions.

Table - 4.17

Responses of the Samples regarding the Use of Forms for Capital Expenditure Control

Forms \ Samples	Corporations	Enterprises	Total
Cost Sheet	12	11	23 (51)
Progress Report	11	10	21 (47)
Authorization Form	8	7	15 (33)
Post Audit	6	6	12 (27)

(Figures in brackets are percentages of total number of samples).

Table 4.17 shows that various forms were used for the same purpose in order of importance and it was found that cost sheet was most important. Among the forms used for capital expenditure decisions, cost sheet and post-audit report were treated as accounting while authorization form or control form and progress report were treated as non-accounting forms. Thus, it is clear that accounting and non-accounting forms were equally used in capital expenditure decisions and control.

There are two main ingredients of capital expenditure control in the nationalised industries and these are treasury control and budgetary control, a brief discussion of these is given below:

(i) Treasury Control

The main treasury control function is to control the sources and uses of funds. When a capital expenditure is proposed and approved, it becomes imperative to control the sources and uses of funds which can be done through the following principal techniques.[33]

(a) Authorization: The first stage of the capital expenditure control and evaluation refers to the approval of projects by the proper authority which means that the funds have been committed or that merely the projects have been included in the Annual Development Plan. Because project may be dropped or changed drastically after approval or projects that have been disapproved may be reconsidered and placed high on the priority list. Such flexibility is essential to capital expenditure control and evaluation.[34] In Bangladesh nationalised industries, the actual implementation of the proposed project would depend upon its inclusion in Annual Development Plan as well as the release of necessary funds by the appropriate authorities on proper time.

(b) Recording Capital Expenditure: The second stage of the capital expenditure control programme is the recording of transactions. As mentioned in the project proforma, the following procedure was followed in the case of selected nationalised industries in Bangladesh:

(1) A capital expenditure project sheet with a serial number is used to record full details or particulars of the authorised project and the number given to each project, indicates the division and the department as well as the numerical sequence of the project.

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33 MOHSIN, M., Financial Planning and Control, Vikas Publishing House Private Limited, New Delhi, 1977, p.120.

34 Ibid., p.121.

(2) A Balance Sheet for each project, prepared at the end of the year, shows the capital employed including equity capital and long-term loan capital, current liability, fixed assets and current assets required for the entire gestation phase of the project;

(3) Supplementary sanction is obtained fortthe project which is likely to exceed the originally decided amount and

(4) Proper accounts are also maintained on financial basis which gives a programme for total capital expenditure cost.

(c) Progress Report: The third stage of capital expenditure control programme is progress reports at regular intervals which provide the basis for timely decision-making at different levels of authority. For purposes of effective control of capital expenditure of the projects, progress report which would include both financial information showing expenditure to date as well as technical information covering progress towards completion, should be submitted to the appropriate authority. In Bangladesh, the concerned industrial sector corporations which are the project sponsoring and project execution authority, used to submit progress reports of the individual projects annually to the concerned Ministry which is the project sanctioning authority and loan giving agency as well. The information furnished through the progress reports indicate the funds position, errors in estimates, etc. The capital expenditure budget compiled with adequqate reporting provide the major tool for control of capital expemditure after the projects are approved.[35]

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[35] MOHSIN, M., op. cit., p.126.

(d) Post Audit: Finally, for the purpose of capital expenditure, it was felt necessary to develop a regular procedure for conducting post audit of the capital expenditure of the projects in the case of selected nationalised industries in Bangladesh. Of course, there is a provision to audit the project accounts only at the end of the gestation phase thus serving no real purpose of audit because such type of balance sheet audit is conducted only after the total capital expenditure had been incurred on the project.

(ii) Budgetary Control

In capital expenditure decisions, control begins at the very decision stage of the expenditure. Budget is the main instrument for decision making and controlling the operations of any enterprise. Capital expenditure in the like manner, should be decided and controlled within the broad framework of budget to make sure of the most successful operation of business under competitive conditions.[36] In many public sector undertakings, the main purpose of the enterprise for the budget in question is to decide its resource utilization in capital expenditure for New or BMR or Expansion projects.[27] The budgets also helped the enterprise to determine the amount of financial assistance required from the Government by way of share capital and long term loan. Therefore, capital expenditure budget if prepared accurately, could act as the main control technique in selected manufacturing industries.

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[36] Institute of Cost and Works Accountants, The Profitable Use of Capital in Industry, Portland Place, London, 1969, p. 39.

[37] MOHSIN, M., Financial Planning and Control, op.cit. pp.126-127.

The selected corporations exercise full control over the activities of their respective enterprises through different techniques. Budgetary control is an important technique by which control is exercised. Both corporation and individual enterprise are required to operate within the approved budget limits and to produce their desired products in conformity with the budgets.[38] For any unsatisfactory performance, both corporations and enterprise are accountable to their respective higher authorities.

The effectiveness of the capital expenditure budget based on past non-accounting and accounting figures as a tool of budgetary control of capital expenditure in the case of nationalised industrial enterprises in Bangladesh could be judged from the total number of 74 out of the total 245 enterprises established during the pre-liberation period, and these 74 projects had been selected for showing the capital expenditure decision analysis. Then to show the uses of accounting information together with the capital expenditure analysis, 14 projects established during post-liberation period i.e., 1972/73 to 1981/82 had also been taken with 74 projects established during the period, 1951/52 to 1970/71.

The use of accounting and non-accounting information in deciding the original capital expenditure requirements of 74 and 14 enterprises set up during the period, 1951/52 - 1971/72 and 1972/73 - 1981/82 respectively under the selected nationalised industries has been examined earlier in Tables 4.14 and 4.15. Now in order to examine the use of accounting and non-accounting information

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38 ALAM, MD. FASHUL, "Collective Bargaining in Bangladesh's Jute Industry", Ph.D. Thesis (Unpublished), Punjab University, Chandigarh, India, 1981, p.197.

together with other reasons and bases for revision of the original estimates of capital expenditure requirements as well as to judge the effectiveness of such revisions and capital expenditure estimates as a means of budgetory control on the nationalised industries sector in Bangladesh, the following Tables 4.18, 4.19, 4.20 and 4.21 have been presented.

Table 4.18 shows the original budgeted and revised budget capital expenditure requirements as well as the actual capital expenditure of 74 enterprises established during the period 1951/52-1971-72. It also shows the increase of actual expenditure over original and revised requirements.

Table - 4.18

Evaluation of Total Costs (Original, Revised and Actual) of 74 Enterprises Established During the 1951/52 - 1971/72 under the Selected Nationalised Industries.

Selected Industries	No.of Projects	Original or Budgeted			Revised Budgeted Costs			Increase of Revised Costs over Original Costs(%)	Actual Cos	
		Local Currency	Foreign Currency	Total	Local Currency	Foreign Currency	Total		Local Currency	Forei Curre
Juta	40	232	389	621	256	398	654	5.31	277	41
Cotton Textile	3	12	20	32	16	21	37	15.62	15	21
Sugar and Food	12	115	98	213	130	109	239	12.21	146	11
Steel and Engineering	8	265	336	601	332	347	679	12.98	350	43
Chemical and Fertilizer	11	299	427	726	425	477	902	24.24	560	58
Total :	74	923	1270	2193	1159	1352	2511	14.50	1348	156

[Source : Based on Appendix-V prepared on the basis of : i. EPIDC, Progress Report 1964-65 to 1968-69,
ii. EPIDC, EPIDC At Work, 1952-70 and
iii. Development Projects, op.cit.]

[Notes: N.A. refers 'Not Applicable' signifying that the actual costs did not increase over the revised budge
Cotton Textile Industry.]

The total original, revised and actual capital expenditure were Tk. 2,193 million, Tk. 2,511 million and Tk. 2,913 million respectively. The actual costs exceeded both the original and the revised requirements in the case of all the industries, on an aggregate, by 32.83 per cent and 16.01 per cent respectively during that period.

The original capital expenditure requirements of these enterprises were decided considering various accounting and non-accounting information as noted earlier in Table 4.7 and subsequently, the decisions regarding requirements were revised taken into account many factors among whom price escalation at home and abroad was worthmentioning. The factors considered for revision of the original capital expenditure requirements are shown in Table 4.20.

The increase in revised cost over the original requirement on an aggregate, was 14.07 per cent and was highest in Chemical and Fertilizer Industry (24.24 per cent). Then, the increase of actual cost over origional and revised capital expenditure requirements was highest in Chemical and Fertilizer Industry recording 57.16 per cent and 26.50 per cent respectively. The increase of actual cost over original cost was also higher in Steel and Engineering and Food Industries recording 30.61 per cent and 21.13 per cent respectively. It is thus evident that the increase of actual cost over original and revised capital expenditure requirements were higher in the cost over original and revised capital expenditure requirements were higher in the heavy industries. As such, heavy industries require

more factual data to be used as the bases for revision of capital expenditure requirements together with specialised technical know-how and longer gestation period.

It is also observed from the same Table that the increase in revised local currency requirements or estimates over original local currency was higher than the revised foreign currency requirements or estimates over original foreign currency requirements in all the industries concerned recording Tk. 236 million (25.57 per cent) and Tk. 82 million (6.46 per cent) respectively. Moreover, there was increase in actual local currency requirements over original and revised local currency requirements by Tk. 425 million (46.04 per cent) and Tk. 189 million (16.30 per cent) respectively and the actual foreign currency requirements also exceeded the original and the revised foreign currency requirements by Tk. 295 million (23.23 per cent) and Tk. 213 million (15.75 per cent) respectively. This state of affairs discloses that the concerned officials of the enterprises might be less conscious about the proper bases of decisions for capital expenditure requirements in the case of local currency components than that of foreign currency components.

In order to evaluate the use of accounting and non-accounting information together with other factors or reasons for revision of the original capital expenditure requirements and also for the increase in actual cost over the revised cost of 14 industrial enterprises set-up during the period 1972/73 to 1981/82 and to judge the effectiveness of such revisions in capital expenditure requirements or estimates as a means of budgetary control, the following Table 4.19 has been presented below:

Table - 4.19

Evaluation or Control of Total Costs (Original, Revised and Actual) of 14 Enterprises Establishe
1972/73 - 1981/82 under the Selected Nationalised Industries

Selected Industries	No of Projects	Original or Budgeted Costs			Revised Budgeted Costs			Increase of Revised Cost over the Original Cost	Actual	
		Local Currency	Foreign Currency	Total	Local Currency	Foreign Currency	Total		Local Currency	For Cur
Jute	2	104	170	274	250	194	444	62.04	121	1
Cotton Textile	6	216	212	428	381	294	675	57.71	279	4
Sugar and Food	3	22	11	33	33	30	63	90.91	47	
Steel and Engineering	1	145	75	220	239	132	371	68.64	303	1
Chemical and Fertilizer	2	1421	1948	3369	2836	3425	6261	85.84	3222	36
Total :	14	1908	2416	4324	3739	4075	7814	80.71	3972	44

[Sources : Based on Appendix-V(B) prepared on the basis of : i. Project Proforma of the Respective Projects and
ii. Official Records of Planning Department under B

[Note : N.A. refers to 'Not Applicable' signifying that there was no increase of actual costs over the revised
Jute Industry.]

The original and the revised capital expenditure requirements and actual cost of such expenditure were Tk. 4,324 million, Tk.4,075 million and Tk. 8,397 million respectively. It is evident from the Table 4.19 that the actual cost exceeded both the original and the revised requirements in the case of all the industries and the increase, on an aggregate, was 94.19 per cent and 7.46 per cent respectively during that period. The revised cost also exceeded the original requirements by 80.71 percent. In revising the original requirements of capital expenditure of these enterprises, various factual bases were taken into account among whom price-escalation at home and abroad, devaluation of Bangladesh currency, higher interest rates on foreign debts, etc. might be worth mentioning. Such bases for revision of the original capital expenditure requirements are shown in Table 4.20

The increase in revised estimates over the original requirements was highest in Sugar and Food, Chemical and Fertilizer, Steel and Engineering Industries to the extent of 90.91 per cent, 85.84 per cent and 58.64 per cent respectively. Again, the increase of actual cost over both the original and the revised capital expenditure requirements was highest in Sugar and Food Industry recording 145.45 per cent and 28.57 per cent respectively followed by Steel and Engineering Industry where the increase of actual cost over both the original and the revised estimates was 115.45 per cent and 27.76 per cent respectively. Moreover, such increase in actual cost over the original cost was 102.76 per cent in the case of Chemical and Fertilizer Industry. From this state of affairs, it is thus evident that the increase was more higher in heavy industries than the less

heavy industries requiring the attention of the proper authorities to use more factual data as the bases for decision for fixing original and revised capital expenditure requirements.

It is also observed from the above Table that the revised estimate for local currency and foreign currency was higher than the original estimate for local currency and foreign currency to the extent of Tk. 1,831 million (95.96 per cent) and Tk. 1,659 million (68.87 per cent) respectively.

Moreover, the actual local currency cost exceeded over both the original and the revised requirements for local currency by Tk.2,064 million (108.18 per cent) and Tk. 233 million (62.23 per cent) respectively. On the other hand, the actual foreign currency cost also exceeded both the original and the revised requirements for foreign currency to the extent of Tk. 2,009 million (83.15 per cent) and Tk. 250 million (8.59 per cent) respectively. The possible reason for such position is that the concerned official of the projects might be less conscious about the proper bases for making estimate and revision of the capital expenditure requirements in the case of local currency components than that of foreign currency components.

In the previous paras, the use of accounting and non-accounting information in deciding revision of the original capital expenditure requirements had been analysed together with their effectiveness for such revisions and evaluation with the actual cost of the above expenditure. Some of the reasons or bases considered forrevision of the original capital expenditure requirements were indentified there. Here the following Table 4.20 showing the various reasons or bases considered for revision of the original capital expenditure requirements has been presented with classification of the reasons under different elements or items of capital expenditure of the 74 enterprises set up during the period 1951-52 to 1971-72 and that of 14 enterprises set up during the period 1972-73 to 1981-82.

Table - 4.20

Reasons for the Revision of Costs Estimates of Capital Expenditure (Item-wise) of the 74 and 14 Projects Established During the Period, 1951/52 to 1971/72 and 1972/73 to 1981/82 respectively under Public Sector of Nationalised Industries

Capital Expenditure Items \ Reasons	Price Escalation (Home) Inflation	High Interest on Foreign Loan and Loan Increase	Price Escalation (Abroad)	*Expansion Revision of the Original Scheme/ Facilities	Natural Calamities (flood etc)	Higher fees of foreign Erectors/ Experts	*Devaluation of Bangladesh currency	*Implementation of National payscale	Wage Board Award	Non-Availability of Materials in local Market
	1	2	3	4	5	6	7	8	9	10
Pre-Construction Expenditure (Land Dev.)	28 (20.59)	-	-	20 (71.43)	8 (100.0)	-	-	-	-	-
Construction Expenditure (Functional Building Residential ")	48 (35.29)	-	8 (20.0)	4 (14.28)	-	-	12 (25.00)	-	4 (100)	4 (100.0)
Machinery and Equipments	24 (17.65)	-	32 (80.0)	-	-	12 (100.0)	36 (75.0)	-	-	-
Other Costs (Including W/Cap)	36 (26.47)	8 (100.0)	-	4 (14.28)	-	-	-	16 (100)	-	-
Total :	136 (38.64)	8 (2.27)	40 (11.36)	28 (7.27)	8 (2.27)	12 (3.41)	48 (13.64)	48 (13.64)	16(4.55)	4 (1.14)

/Notes: (i) Expansion include additional land, (ii) * Bangladesh Taka had been devalued in 1975 by 58%, (iii) Implementation of two N.P.S. in 1973 and 1977,

(iv) Other Costs: installation expenses, overhead cost of the sponsoring agency, overhead cost of the Project, interest during construction, allowance for unforeseen and miscellaneous and (v) Individual Figures in parentheses are row-percentages while total figures in parentheses are column-percentages./

/Source: Project Proforma of the Individual Enterprises and Official Records of the Planning and Development Departments/Divisions of the Selected Industries./

Contd...

Table - 4.20 (contd)

Reasons / Capital Expenditure Items	Delay in Finalisation of Work Order	Unstable Political Situation	Delay in Floatation of Tender	High labor Charges of Technical personnel	Increase in Freight Charge	Fluctuation in Foreign Exchange Rates	Government Taxation Policy	Total
	11	12	13	14	15	16	17	18
Pre-Construction Expenditure	-	-	4 (50.00)	-	-	-	-	60 (17.05)
Construction Expenditure	12 (100.0)	4 (50.0)	4 (50.00)	-	-	-	-	100 (28.41)
Machinery and Equipment	-	4 (50.0)	-	4 (100.0)	4 (100.0)	4 (100.0)	-	120 (34.09)
Other Costs	-	-	-	-	-	-	8 (100.0)	72 (20.45)
Total :	12 (3.41)	8 (2.27)	8 (2.27)	4 (1.14)	4 (1.14)	4 (1.14)	8 (2.27)	352 (100.00)

It is observed from the above Table 4.20 that there were a number of accounting and non-accounting reasons or bases considered for revision of the original capital expenditure requirements, viz. price escalation or hyper-inflation at home and abroad, high interest charges on foreign loan, higher fees of foreign erectors or experts, evaluation of Bangladesh currency in 1975 by 58%, implementation of two National Pay Scales in 1973 and 1977, Wage Board Award, non-availability of required materials in local markets, Government taxation policies, natural calamities such as flood, cyclone, etc., delay in finalization of work order, unstable political situation, fluctuation in foreign exchange rates, etc.

The reasons or bases considered for revision of the original capital expenditure requirements as stated above were at the varying degrees shown in the said Table. Among the reasons or bases, price escalation or hyper-inflation at home was the highest recording 38.64 per cent for revision in all the elements of capital expenditure of the said enterprises. For this reason, the break-up of the percentage among the elements or items was: 'pre-construction expenditure' at 20.59 per cent, 'construction expenditure' at 35.29 percent, 'machinery and equipment' at 17.65 per cent and 'other costs' at 26.47 per cent. Then, devaluation of Bangladesh currency in 1975 was the second highest reason recording 13.64 per cent considered responsible for revision of the original capital expenditure requirements. Price escalation abroad was also the important reason recording 11.36 per cent for such revisions. Other reasons or bases considered for the revision were in order of importance: expansion of the original scheme (7.95 per cent), implementation of

national pay scale (4.55 per cent), delay in finalization of work order (3.41 per cent), and higher fees of foreign erectors or experts (3.41 per cent), high interest rates on foreign loan, natural calamities, non-availability of materials in local markets, unstable political situation, delay on floatation of tender and Government taxation policy each recording 2.27 per cent, and wage board award, higher labour rates of technical personnel, increase in freight charges/rates and fluctuation in foreign exchanges rates each recording 1.14 per cent.

It is also evident from the same Table that among the major four elements of capital expenditure, 'machinery and equipments' item was subject to maximum revision recording 34.09 per cent followed by 'construction expenditure' item (28.41 per cent), 'other cost' item (20.05 per cent) and 'pre-construction expenditure' item (17.05 per cent). Price escalation or hyper-inflation at home and abroad, devaluation of Bangladesh currency, higher fees of foreign experts and erectors, etc. were the main reasons or bases considered for revision of 'machinery and equipments'. Then, price escalation at home and abroad, devaluation of Bangladesh currency, delay in finalization of work order, etc. also were the main considerations for revision of another item, 'construction expenditure'. Again, price escalation at home, expansion of the original projects, natural calamities like flood, and delay in floatation of tender were the reasons for revision of the 'pre-construction expenditure' item. The main factors or bases considered for revision of 'other costs' were price escalation or hyper-inflation at home, high interest rates on foreign loan, implementation of national pay scale, expansion of the original scheme

and Government taxation policy. It is thus evident from the analysis of the bases or reasons for revision of the original capital expenditure requirements that the bases or reasons stated above were related more or less with the economic factors and information which would be termed as the non-accounting information used for the purpose. The extent of use non-accounting information instead of accounting information was very high regarding decisions for revising the original capital expenditure requirements and for making comparative study of the actual costs with the original and the revised capital expenditure requirements as a matter of budgetary control in the enterprises under selected industries.

Reasons for revision of capital expenditure requirements or estimates as mentioned in Project Proforma and Official Records of the selected industries had been shown in the above Table 4.20. We were also interested to know from our respondents regarding the reasons for revision of capital expenditure requirements. It is observed from both the Tables 4.20 and 4.21 that there were some common reasons, viz., price escalation at home and abroad, devaluation of Bangladesh currency and revaluation of foreign exchange rates, delay in finalization of work order, lack of or higher labour charge of technicians and skilled hands, etc.

The following Table 4.21 exhibits the reasons for revision of original capital expenditure estimates for proper implementation of capital expediture programme.

Table - 4.21

Responses of the Samples regarding the Reasons for Revision of Capital Expenditure Estimates

Reasons \ Samples	Corporations	Enterprises	Total
Price Escalation Abroad	17	15	32 (71)
Inflation at Home Market	10	13	23 (51)
Lack of Skilled Hands at Implementation Stage	7	9	16 (35)
Lack of Foreign Lined-up Credit	8	6	14 (31)
Delay in Approval of Proposed Projects	9	4	13 (29)
Devaluation of Bangladesh Currency and Revaluation of Foreign Exchange Rates	9	3	12 (27)
Delay in Placement of ADP Funds	8	2	10 (22)
Delay in Shipment of Plant and Machineries by Foreign Supplier	7	2	9 (20)
Rate of Return Below Expected One	Nil	3	3 (7)

(Figures in brackets are percentages of total number of samples).

The above Table shows various reasons for such revision in order of importance and it is thus clear that in most cases revision of original capital expenditure estimates were done due to price escalation at home and abroad.

It had been observed in particular that the actual capital expenditure requirements exceeded both the original and the revised budget estimates due, among others, to lack of proper use of budgetary and treasury control techniques. Various factors directly or indirectly related with capital expenditure decisions, however, were held responsible for this adverse position and some observations about the important factors are noted below:

i. Unnecessary delay at the formulation stage of the project because of conducting detailed feasibility study of the project on the basis of various data other than accounting and of following long-drawn and complicated procedure of project preparations;

ii. Unnecessary delay at the approval stage of the project because of round-about methods and techniques for approval of the projects;

iii. Unnecessary delay at the execution stage of the project because of the paucity of foreign exchange funds, delay in getting the necessary funds and excessive delays in the procurement of machineries and equipments, spare parts, raw materials, etc.;

iv. Unusual delay in the formulation, appraisal and implementation stages resulted in an unusual increase in the prices of raw materials, wages, machinery and equipment both at home and abroad, increased quantum and cost of civil engineering and feasibility study works, and engagement of sufficient number of foreign experts and consultants;

v. Lack of proper knowledge and training of project personnel and shortage of technical hands stand in the way of making sound project feasibility study leading to uneconomic capital expenditure requirements decision;

vi. Lack of specific cost and revenue estimate and comparative study thereof due to non-availability of adequate accounting data and information of similar projects as well as inadequate use of available accounting information in the proposed capital expenditure of a new industrial enterprise together with inflationary price trend both at home and abroad leading to insufficient project economics and poor capital expenditure decisions;

vii. Lack of proper consideration of some basic financial data such as customs duties, cost involved in offering training of the project personnel, expert's consultancy fees, etc. in the original budget estimate or capital expenditure and

viii. Inaccurate financial forecasts and economic validity of the projects and improper classification of capital expenditure in the capital budget on the basis of object-wise rather than activities and end-results basis.

The factors noted above seemed to have contributed to the increases in the actual costs over the original and revised estimates as well as indicated the inadequate and low use of accounting data and information in capital expenditure decisions of the nationalised industries in Bangladesh thus affecting the profitability of the projects under study.

CHAPTER - 5

WORKING CAPITAL DECISIONS AND USE OF ACCOUNTING INFORMATION

During the operating period of an undertaking, what is quite important is the working capital decisions and control which are analysed in this chapter in the context of the management use of accounting information. In the operating period, the usual emphasis is on the maintenance of just adequate level of liquidity and the minimization of the cost of short-term funds i.e. working capital. To achieve these objectives, the management needs to ensure the maintenance of an appropriate size and structural composition of the working capital and in this process it makes choice for the right sources for working capital finance to run its operations smoothly. Since the selected industries have undergone organizational and administrative changes posing several problems the analysis is based on their operations as nationalised industries from 1975-76 to 1979-80.

5.1 Concepts of Working Capital Decisions

Proper working capital enables an industrial enterprise to maintain its credit-worthiness and debt repayment capacity and thus helps to keep itself in liquid position. It helps management in taking vital financial decisions with regard to assessing resources for acquisition and operation of fixed assets, selecting best alternatives, planning for requirement of long term debt, deciding sound dividend policy and covering involuntary losses on operation.[1]

[1] MOORE, C.L. and JAEDICKE, K.K., Managerial Accounting, South-Western Publishing Co., Ohio, 3rd Ed., 1967. p.202.

Working capital decisions involve the administration of current assets like inventories, receivable and cash as well as administration of current liabilities. Working capital is the amount of funds which an enterprise has to provide for its day-to-day operations. Ramamoorthy[2] says that views on the concepts and definitions of working capital differ. Whenever working capital is mentioned it brings to mind current assets and current liabilities with a general understanding that it is the difference between the two.[3] The gross working capital is also termed as current or circulating capital and represents the sum-total of all current assets of the enterprise. On the other hand, net working capital also known as net current assets is represented by the difference between current assets and current liabilities i.e. excess of current assets over current liabilities. But in the beginning it is required to qualify the areas specifically and from the operational point of view working capital in this study, becomes synonymous with current assets only. This concept would be useful to the groups interested in determining the amount and nature of assets which may be used to meet current liabilities.

Determination of the short-term financial objectives and policies is an important aspect of the working capital decisions. The enterprises are required to formulate short-term financial objectives and policies with regard to (i) decisions governing the

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2 RAMAMOORTHY, V.E., Working Capital Management, Institute of Financial Management and Research, Madras, 1978, p.6.

3 COLE, V.L., "The Management of Working Capital", The Australian Accountant, Vol. XXIX, No.6 (June, 1959), p.319.

amount of working capital requirements to achieve the business objectives, (ii) decisions governing the structural components of working capital of the enterprises and (iii) decisions governing the sources of finance to meet working capital. A brief analysis on the short-term financial (a) objectives and (b) policies in the selected nationalised industries had been made below.

(a) Short-term Financial Objectives

Short-term financial objectives are required to run the operations of an enterprise smoothly. The Table 5.1 shows the responses of the samples as regard the short-term financial objectives in the selected nationalised industries:

Table - 5.1

Responses of the Samples regarding the Short-Term Financial Objectives

Samples / Short-term Financial Objectives	Corporations	Enterprises	Total
Generating Profits	15	22	37 (82)
Minimizing Cost of Short-term Funds	12	14	36 (80)
Maintenance of Liquidity	16	19	35 (78)
Financing of Working Capital Requirements	11	9	20 (44)
Full Capacity Utilization	7	8	15 (33)

(Figures in brackets are percentages of total number of samples).

The Table shows the short-term financial objectives and generating profits was found to be the main short-term financial objective of the selected nationalised industries. Among the short-term financial objectives as identified to be pursued, generating profits, maintenance of liquidity and minimizing cost of short-term funds were treated as accounting while other remaining objectives were termed as non-accounting ones. Thus, it appears that short-term financial objectives were mostly related with accounting aspects or information.

(b) Short-term Financial Policies

Short-term financial policies are also essential for smooth operations of the enterprises. The following Table 5.2 exhibits the responses of the samples as regards the short-term financial policies of the industries under study:

Table - 5.2

Responses of the Samples regarding the Short-term Financial Policies

Short-term Financial Policies \ Samples	Corporations	Enterprises	Total
Optimum Size of Working Capital	14	16	30 (67)
Sources of Finance for Working Capital Requirements	10	13	23 (51)
Sound Credit and Collection Policies	8	11	19 (42)
Proper Decisions and Control of Inventories	5	6	11 (24)
Sound Decision and Control of Cash	2	8	10 (22)
Proper Decision and Control of Receivables	2	7	9 (20)
Employment of Retained Earnings for Capacity Expansion	3	5	8 (18)

(Figures in brackets are percentages of total number of samples).

Table 5.3 shows the short-term financial policies in order of importance and it is evident that working capital decisions and control was given top priority in short-term financial policies of the nationalised industries. Among the identified short-term financial policies, optimum size of working capital, payment of retained earnings for expansion of capacity and cash management were treated as accounting while the remaining policies were treated as non-accounting ones. It thus appears that short-term financial policies were mostly related with non-accounting aspects than accounting aspects or information.

After the emergence of Bangladesh, the nationalised industrial enterprises had been facing a lot of problems among which the important one was the mismanagement in the field of financial management with particular reference to working capital. The specific problem encountered by the nationalised enterprises was to raise adequate working capital to finance its running costs.[4] Consequently, the earning power of the individual enterprises had been greatly affected due to inefficiency in the sphere of working capital decisions and control which were a vital factor for achieving the desired operational efficiency. As such, there had been continued problem of working capital decisions and control in these nationalised industries under various sector corporations which had been operating under the problem of liquidity gap of about Taka 98 crore, of which

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[4] SOBHAN, REHMAN and AHMED MUZAFFER, Public Enterprise in an Intermediate Regime : A Study in the Political Economy of Bangladesh, op. cit., p. 496.

jute industry alone accounted for Taka 87 crore.[5] The liquidity gap was created due to inheritance of capital structure from the earlier management and ownership and had to be met out of bank loan and Government subsidy. Subsequently, working capital fund possessed by some of the enterprises was also absorbed by the large amount of interest charged on the bank loan and Government subsidy.

The purpose of this chapter is to show the present position of working capital of the nationalised industries in Bangladesh with the main objectives of determining the efficiency or inefficiency of their working capital decisions and control in the context of management use of accounting information for the purpose. Such analysis would portray the real picture of financial operations of the industrial enterprises and this analysis might be a valuable guide to the management in analysing the past position, evaluating the future plans of the enterprises and measuring the impact of use of accounting information in working capital decisions and control on the enterprises' liquidity and on their financial performances. This would also help the management to measure the disequilibrium and imbalances if any, of the uses of working capital funds for taking corrective actions.

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[5] Cf., NID, Ministry of Industries, Government of the People's Republic of Bangladesh, Report on Liquidity Gap of Nationalised Industries, 1973, SOBHAN, REHMAN and AHMAD, MUZAFFER, Public Enterprise in an Intermediate Regime : A Study in the Political Economy of Bangladesh, op.cit., p.500 and HOQUE, MD. JAHIRUL, "Financial Planning and Control in the Public Sector Industries in Bangladesh", op.cit., p.83.

5.2 Working Capital Requirements Decision

Having discussed the importance of working capital decisions and control together with the concepts of working capital and delineation of short-term financial objectives and policies, it is now essential to deal with the management use of accounting information in the working capital requirements decision, an important variable of working capital decisions and control. Working capital is required for procuring raw materials, stores and spareparts, incurring operational expenses like wages, salaries, rent power, interest, insurance, sales and distribution expenses and paying the dividends, taxes and other liabilities. A correct diagnosis of working capital requirement is essential. Inadequate working capital may mean, among other things, that the assets purchased out of fixed capital cannot be utilized effectively. While excessive working capital means insufficient volume of business and unremunerative use of scarce resources. Too small a working capital, although yielding an immediate higher return on capital employed, may reduce the earning capacity of fixed capital employed over succeeding periods while excess working capital would lower the capital turnover ratio, and thus bring down the overall return on capital employed.[6] Thus adequate but not excessive and not insufficient working capital is required for meeting all expenses and liabilities promptly, for preserving bank credits and for taking care of emergency needs.

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[6] CHAKRABORTY, S.K., "Management of Working Capital and the Operating Cycle Concept", Topics in Accounting and Finance, Ed. by Chakraborty, S.K. et. al., Oxford University Press, Calcutta, (C) Indian Institute of Management 1976, p. 65.

Various factors or bases are duly takeninto account while deciding the working capital requirements in the nationalised enterprises under selected industries. The following Table 5.3 exhibits the responses of the samples as regards the various factors or types of information considered in deciding the working capital requirements:

Table - 5.3

Responses of the Samples regarding the Factors or Bases for Deciding Working Capital Requirements

Factors or Bases of Working Capital Requirements Decision / Samples	Corporations	Enterprises	Total
Nature of the Business	18	16	34 (75)
Maintenance of Production Schedule or Manufacturing Cycle (Quantum of Feasible Production)	16	15	31 (69)
Position of Business Cycle	16	13	29 (64)
Production Policies	10	15	25 (55)
Capacity - Utilization	11	10	21 (47)
Profit Targets	9	10	19 (42)
Competitive Conditions	7	10	17 (38)
Taxation Rules	9	7	16 (35)
Shifts in Customers' Demand for Products	7	8	15 (33)
Dividend Policy	6	6	12 (27)
Depreciation Policy	6	5	11 (24)
Procurement Policy	3	5	8 (18)
Others: Inventory Turnover, Wages Payment System, Lead Time, Credit Policies (Credit Terms to Customers), etc.	4	3	7 (15)

(Figures in brackets are percentages of total number of samples).

The above Table shows various factors/bases considered for the same purpose in order of importance. Among the identified factors, taxation, dividend policy, profit levels and depreciation policy were termed as accounting factors while the remaining factors were considered as non-accounting ones. Thus, both accounting and accounting factors or information were considered for deciding working capital requirements, among which non-accounting factors outweighed the accounting factors or information.

Further based on Table 5.3, the responses of the samples as regards the extent of accounting and non-accounting factors or bases for deciding working capital requirements are shown in the following Table 5.4.

Table - 5.4

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Factors or Bases for Working Capital Requirements Decision

Bases or Factors for Working Capital Requirements / Levels of use	Accounting	Non-accounting	Total	Level of Significance
Corporations	30 (25)	92 (75)	122 (100)	Chi-Square = 0.112
Enterprises	28 (23)	95 (77)	123 (100)	Not Significant at .05 level.
Total :	58 (24)	187 (76)	245 (100)	

(Figures in brackets are column - percentages).

From the above Table it is clear that 76 percent and 24 per cent of the samples perceived the factors considered for deciding working capital requirements as related to non-accounting and accounting information respectively. Of the samples at corporation level, 75 percent perceived the same factors as related to non-accounting information while 25 percent of them perceived the factors as related to accounting information. On the other hand, of the enterprise heads, 77 percent and 23 percent perceived the same factors as related to non-accounting and accounting information respectively. Then, of the samples who viewed the same factors as related to non-accounting, 51 percent and 49 percent belonged to the categories of enterprise heads and corporations' samples while of the samples who viewed the same factors as related to accounting, 52 per cent and 48 per cent belonged to the categories of corporations' samples and enterprise heads respectively.

It is thus evident from the opinion of the respondents that there was tremendous use of non-accounting information as bases in deciding the working capital requirements, both at corporation and enterprise levels. But there was no significant relationship between the extent of use of non-accounting information as bases in working capital requirements decision and the levels of use (not significant at .05 level). That is, the opinion variation as regards the extent of use of non-accounting and accounting information as bases in deciding the working capital requirements was independent of the variations in the levels of use and thus resulting in shortage of required working capital in the nationalised industries affecting the very financial performances of the concerns under study.

Bangladesh nationalised industries under study used to manage working capital by adopting the conventional approach instead of operating cycle approach which is a recent phenomenon. The same conventional approach to working capital views working capital as a function of the volume of operating expenses. Under this approach, working capital is needed to cater to the needs of carrying on operational activities and is not considered merely as security for creditors.[7] On the other hand, the concept of operating cycle approach to working capital suggests that the optimum level of working capital is to be determined by the duration of the operating cycle and the operating expenses needed for completing the cycle. The duration of the operating cycle is equal to the number of days involved in the various stages commencing from acquisition of raw materials and ending with realization of proceeds from sundry debtors.[8]

In nationalised industrial enterprises of Bangladesh, capacity utilization and volume of possible production were considered as major factors in deciding the working capital requirements.[9] In these industrial enterprises, it was observed that for local and imported materials, 3 months and 6 months' stock were considered

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7 CHAKRABORTY, S.K., "Management of Working Capital and the Operating Cycle Concept", Working Paper Series Number I, Indian Institute of Management, Calcutta, 1973.

8 BHATTACHARYA, K.K., "Working Capital Management and Inflation", Topics in Accounting and Finance (Ed. by Chakraborty, S.K. et.al.), Oxford University Press, (C) Indian Institute of Management, Calcutta, 1976, p. 53.

9 Cf., SOBHAN, REHMAN and AHMAD, MUZAFFER, Public Enterprises in an Intermediate Regime : A Study in the Political Economy of Bangladesh, op.cit., p.496.

feasible respectively. But for finished goods, 15 days to 30 days' stock of production level was treated as basis for estimating work-in-process. The estimate for Steel and Engineering Industry was on an average of 60 days' production level. Stores and spares are usually imported from outside the country and that's why stock of of 6 months' production level was considered necessary for this item. Trade debts upto 1 month's stock were considered reasonable and advances, deposits and pre-payments showed great variation with some sectors claiming upto 6 months' stock for their payment period.

In accordance with the factors considered in deciding the working capital requirements the following Table 5.5 whows the position or size of working capital requirements (budgeted) of the industrial enterprises under selected nationalised industries for the period, 1975-76 to 1979-80:

Table - 5.5

Decision on Size of Working Capital Requirements (Budgeted) for 245 Ent
the Selected Nationalised Industries for the Period Covering 1975-76 to

Selected Industries / Years	Jute		Cotton Textile		Sugar and Food		Steel and Engineering	
	Original	Revised	Original	Revised	Original	Revised	Original	Revi-
1975-76	3336	3121	1603	1646	1657	1655	1486	1560
1976-77	3354	3944	2372	2106	1721	1862	1993	1993
1977-78	4326	5627	2607	2611	1742	1769	1932	2096
1978-79	5524	4517	3102	2816	1843	2555	2509	2599
1979-80	5252	5298	3812	3256	2179	2279	3362	3022
Total :	4358	4501	2699	2487	1828	2024	2256	2254

[Source: Budget Estimates of the Enterprises under Selected Industries for 1975-76 to 1979-80.]

From the above Table 5.5 it is clear that Jute and Sugar and Food industries showed increase of revised budget estimates of working capital to the extent of 3.28 percent and 10.72 percent over the original budget estimates respectively while remaining industries, viz. Cotton Textile, Steel and Engineering, and Chemical and Fertilizer showed decrease of revised budget estimates of working capital to the extent of 7.85 per cent, .09 per cent and 1.24 percent over the original budget estimates respectively.

The following Table 5.6 shows the actual gross and net working capital of 245 enterprises under the selected nationalised industries for the period under review:

Table - 5.6

Size of Actual Working Capital (W/C) of 245 Enterprises Under the S
Nationalised Industries for the Period Covering 1975-76 to 1979-8

Industries / Years	Jute		Cotton Textile		Sugar and Food		Steel a Enginee	
	Gross Working Capital	Net Working Capital	Gross W/C	Net W/C	Gross W/C	Net W/C	Gross W/C	N W
1975-76	2233	432	1537	13	982	222	1543	
1976-77	2256	263	1403	(190)	1276	281	1565	
1977-78	3072	171	2231	(267)	1303	160	1659	
1978-79	3599	365	2307	(329)	1214	157	1857	
1979-80	4575	1535	2333	(398)	1525	240	2507	
Average :	3147	553	1962	(234)	1260	212	1826	

Source: Appendix-II(A) to II(F) Based on Annual Performance Reports/
of the Enterprises.

Notes : Total Current Assets - Total Current Liabilities = Net/Actua
Figures in the parentheses represent negative net working cap

It is evident from the Table 5.6 that all industries on an average, showed positive working capital except Cotton Textile Industry which had got negative net working capital during period under study. Then, Chemical Industry also showed negative net working capital for the year 1975-76 only.

The smooth functioning of the enterprises depends on the adequacy or otherwise of the working capital requirements. The following Table 5.7 exhibits the responses of the samples as regards the methods or bases applied for testing the adequacy or otherwise of working capital requirements in the selected nationalised industries:

Table - 5.7

Responses of the Samples regarding the Methods Applied for Testing the Adequacy of Working Capital Requirements

Methods Applied for Testing of Adequacy of Working Capital Requirements \ Samples	Corporations	Enterprises	Total
Current Ratio	16	20	36 (80)
Acid Test Ratio	13	17	30 (67)
Net Working Capital Turnover	8	10	18 (40)

(Figures in brackets are percentages of total number of samples).

The above Table shows the methods used for testing the adequacy of working capital requirements in the selected nationalised industries and these methods in order to importance were: current ratio (80 percent), acid-test ratio (67 percent) and net working capital turnover ratio (40 percent). Thus, it is clear that the tests used or applied were based on accounting information.

The adequacy or inadequacy of working capital can also be tested through liquidity ratio i.e. current and acid test ratios and the following Table 5.8 shows the current and acid-test or quick ratios of 245 enterprises under the selected enterprises for the years under review.

Table - 5.8

Adequacy Test of Working Capital through Current and Acid-Test Ratio
Liquidity Ratio) for 245 Enterprides under the Selected Industries f
1975-76 to 1979-80

Selected Industries with Ratios / Years	Jute		Cotton Textile		Sugar and Food		Steel and Engineering		Che Fert
	Current Ratio	Acid Test Ratio	Current Ratio	Acid Test Ratio	Current Ratio	Acid Test Ratio	Current Ratio	Acid Test Ratio	Curre Rati
1975-76	1.24	0.50	1.01	0.51	1.29	0.58	1.23	0.86	0.8
1976-77	1.13	0.47	0.88	0.60	1.28	0.49	1.30	0.98	1.2
1977-78	1.06	0.48	0.89	0.72	1.14	0.44	1.25	0.93	1.2
1978-79	1.11	0.46	0.87	0.69	1.15	0.48	1.23	0.44	1.2
1979-80	1.50	0.63	0.85	0.67	1.19	0.47	1.18	0.47	1.2
Average :	1.21	0.51	0.90	0.64	1.21	0.49	1.24	0.74	1.1

[Notes : (i) Current Ratio = $\frac{\text{C/Assets}}{\text{C/Liabilities}}$ (in times) and (ii) Quick or Acid Test = $\frac{\text{C/}}{\text{C/}}$

[Source: Based on Appendix III(A) to III(E) attached herewith].

It is observed that the average current ratio and acid-test ratio during the period showed variation between 0.90 to 1.24 and 0.49 to 0.92 respectively. Normally current ratio of 2 and acid test ratio of 1 has been thought by the authors of financial management to be the standard yard-stick for judging the adequacy of working capital.[10] Here, the average current ratio and acid-test ratio of each industry was below the standard. The Steel and Engineering Industry showed the highest current ratio (1.24) and Cotton Textile Industry showed the lowest current ratio (0.90). Then, the Chemical and Fertilizer Industry showed the highest acid test ratio (0.92) while Sugar and Food Industry showed lowest acid-test ratio ratio (0.49). Taken all the industries together, the current ratio, on an average recorded 1.14 and acid test ratio recorded 0.66. The average current ratio of Cotton Textile Industry was lower (0.90) than the aggregate ratio (1.14) and average acid test ratio of Jute, Cotton Textile and Sugar and Food Industries were lower (according 0.51, 0.64 and 0.49 respectively) than the aggregate ratio (0.66). From the above analysis it is evident that there was insufficient working capital resulting in unhappy liquidity position for all these industries.

The following Table 5.9 shows the adequacy test of working capital of 245 enterprises in terms of net working ratio to sales for the period, 1975-76 to 1979-80.

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10 MOHSIN M., Financial Planning and Control, Vikas Publishing House Private Ltd., New Delhi, 1974, p. 174 and WESTON, F. FRED and BRIGHAM, F. EUGENE, Managerial Finance, Holt, Richart and Winston, New York, USA, 5th Ed., 1975, p.66.

Table - 5.9

Adequacy Test of Working Capital of 245 Enterprises under Selected Industries in Terms of Net Working Capital to Sales Ratio for the Period, 1975-76 to 1979-80

(In Percentages)

Selected Industries / Years	Jute	Cotton Textile	Sugar and Food	Steel and Engineering	Chemical and Fertilizer	Total Average
1975-76	14.70	0.71	18.30	24.55	-	11.65
1976-77	8.88	-	19.62	23.62	27.91	16.01
1977-78	4.21	-	7.96	21.66	26.51	12.07
1978-79	8.05	-	7.35	16.65	26.29	11.67
1979-80	24.19	-	10.58	14.97	28.48	15.64
Average :	12.01	0.14	12.76	20.29	21.84	67.04

[Note : (i) Net Working Capital to Sales Ratio = $\frac{\text{Net W/Cap}}{\text{Net Sales}} \times 100$ and

(ii) In the case of negative working capital, the ratio of net working capital to sales is not relevant.]

[Source: Based on Appendix-III(A) to III(E)]

It is evident from the said Table 5.9 that Jute, Sugar and Food, Steel and Engineering and Chemical Industries showed positive relationship between actual sales and net working capital recording on a average, 12.01 percent, 12.76 percent, 20.29 percent, and 21.84 percent respectively. While Cotton Textile Industry showed negative and very low ratio carrying 0.14 percent only. It is also observed that there was relatively less appropriate use of long term funds or shareholders' equity in these industries. Moreover, the low ratio indicates the poor

liquidity position of the selected industries. It thus points out that the net working capital was not at all sufficient in Cotton Textile Industry during the period under study.

In order to know the sufficiency or insufficiency of the net working capital requirements of the enterprises, another adequacy test in terms of working capital turnover for the period, 1975-76 to 1979-80 had also been presented in the following Table 5.10.

Table - 5.10

Adequacy Test of Working Capital of 245 Enterprises Under Selected Nationalised Industries in Terms of Working Capital Turnover for the Period, 1975-76 to 1979-80

(In Percentages)

Selected Industries / Years	Jute	Cotton Textile	Sugar and Food	Steel and Engineering	Chemical	Total (Average)
1975-76	6.80	140.00	5.91	4.07	(3.89)	30.58
1976-77	11.27	(9.54)	5.10	4.23	3.58	2.93
1977-78	23.77	(5.66)	12.56	4.62	3.77	7.81
1978-79	12.42	(7.59)	13.60	6.01	3.80	5.65
1979-80	4.13	(6.14)	9.45	6.68	3.51	3.53
Average :	11.68	22.22	9.34	5.12	2.12	50.51

[Notes : (i) Working Capital Turnover = $\frac{\text{Sales (Net)}}{\text{Working Capital}}$ and

(ii) the figures in parentheses refer to negative working capital turnover which are not relevant for the purpose.

[Source : Based on Appendix-II(A) to II(E).]

It is seen from the above Table that Jute, Sugar and Food, Steel and Engineering and Chemical and Fertilizer Industries showed on an average, positive but low ratio of actual sales to net working capital for the period under review recording 11.68 percent, 9.34 percent, 5.12 percent and 2.15 precent respectively. While Cotton Textile Industry showed negative ratio of sales to working capital for the period 1976-77 to 1979-80, and high positive ratio for 1975-76 only.

It is also evident from the said Table that all the industries taken together, the year 1975-76 showed highest ratio of sales to working capital recording 30.58 percent and the remaining periods of study showed lower ratios indicating the unhappy liquidity position of the industries i.e. the size of working capital was not sufficient enough in the selected industries for the period under study.

The vital factor responsible for such dismal position of working capital was the indifferent attitude of the concerned enterprise management towards maintenance of adequate liquidity. Though the principal consideration for granting bank loan was the adequate liquidity position of the enterprises, yet they were granted bank loan for working capital not on the criteria of their liquidity and solvancy, but on consideration of their status as nationalised industries. Another important factor for such poor condition was the unusual and peculiar working capital problem due to the inherited current liabilities of the abandoned enterprises. Then, other noted reasons for inadequate working capital of the nationalised

industries were that estimate of working capital requirement was not properly made on the basis of the past accounting information data but on intuition and hunches, factors influencing the working capital requirements were not properly considered and scientific methods for forecasting the working capital requirements were also not applied properly.

5.3 Working Capital Structural Components Decision

Having decided upon the working capital requirements of the industrial enterprises, it is also essential to decide the structural components of working capital with due importance. Among the various writers and thinkers of financial management, classical writers[11] have emphasised the necessity for deciding the structural composition of working capital by the management of the enterprises. It had been gathered from the accounting information as available in the financial statements that the following current assets constituted the major composition of gross working capital of the selected industries:

a. Inventory
b. Accounts Receivables
c. Cash and Bank Balances and
d. Other Current Assets.

The Table 5.11 shows the actual structural components with their percentage analysis of the selected industries for the period under review.

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11 YARDENI, EDWARD E., "A Protfolio Balance Model of Corporate Working Capital", Journal of Finance, Vol. XXXIII, No. 2, May, 1978, p. 535.

Table - 5.11

Percentage Analysis of Total Current Assets or Gross Working Capi
245 Enterprises Under the Selected Nationalised Industries for th
1975-76 to 1979-80

Selected Industries	Jute		Cotton Textile		Sugar and Food		Steel and Engineering		Chemic Ferti
Working Capital Components	Million Tk.	% of Total	Million Tk.	% of Total	Million Tk.	% of Total	Million Tk.	% of Total	Million Tk.
Inventory	1824	57.96	572	29.15	751	59.60	793	43.43	512
Accounts Receivables	1237	39.31	993	50.62	425	33.73	700	38.33	1365
Bank/Cash	86	2.73	94	4.79	61	4.84	123	6.74	12
Others	Nil	Nil	303	15.44	23	1.83	210	11.50	901
Total :	3147	100%	1962	100%	1260	100%	1826	100%	2790

[Source: Based on Data shown in Appendix II(A) to II(B).]

[Notes : (i) Others include investments and prepaid expenses and (ii) Average f
under study are shown.]

It is evident from the Table that inventory the first important component of the working capital, on an average recorded 41.70 percent of the gross working capital for the period under review. The inventory of Sugar and Food Industry constituted the highest percentage of working capital 59.60 percent followed by Jute Industry recording inventory at 57.96 percent of working capital. The size of inventory in Steel and Engineering, Cotton Textile and Chemical Industries recorded 43.43 percent, 29.15 percent and 18.35 percent of gross working capital respectively. The overall position of all the industries in respect of the size of industry seemed to be below the standard of 50[12] percent of gross working capital. The position of Jute and Sugar and Food Industries in respect to the adequacy of inventory was however, above the normal standard.

Then accounts receivable constituted higher portion of gross working capital on an average, recording 42.18 percent in tespect of all the industries taken together. Separately, accounts receivables in Cotton Textile Industry recorded the highest percentage of gross working capital (50.62 percent) followed by Chemical and Fertilizer Industry which on an average, recorded 48.92 percent. Accounts receivables in Jute, Sugar and Food and Steel and Engineering Industries recorded 39.31 percent, 33.73 percent and 38.33 percent respectively. The size of accounts receivables for all the industries on an aggregate and in Cotton Textile Industry

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12 Cf. HABIBULLAH M., Industrial Efficiency and Profitability in Bangladesh. op.cit., pp. 23 and 37.

appeared to be exceesive as compared to optimal level of 40 per cent of gross working capital which was treated as the normal standard for judging the adequacy of this element.[13]

Cash and bank balance, another important component of working capital, constituted insignificant share of gross working capital recording 3.91 percent only on an average for all the industries and the percentage distribution among the industries varied from 0.44 percent to 6.74 percent. The Steel and Engineering Industry recorded the highest percentage 6.74 percent and Chemical Industry recorded the lowest percentage 0.44 percent cash and bank balance as compared to gross working capital. But size of cash and bank balance in all the industries seemed to be below the optimal level of 10 percent of gross working capital.[14]

"Other Current Assets" which comprise here investment and prepaid expenses recorded on an average, 12.21 percent of working capital for all the industries in aggregate for the period under study. It ranged from 32.29 percent to 1.83 percent, the highest percentage being recorded by Chemical and Fertilizer Industry and the lowest percentage by Sugar and Food Industry. This size of "other current assets" appeared to be proportionately high as compared to the cash and bank balance component of all the industries together.

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13 HAMPTON, JOHN F., Financial Decision Making : Concepts, Problems and Cases, Prentice-Hall of India Private Ltd., New Delhi, 2nd Ed., 1980, p.154.

14 Cf., RAMAMOORTHY, V.E., op.cit., p.19.

5.3(a) Inventory Decisions and Control

Inventories constitute the major element in the working capital of many business and industrial undertakings. Inventory decisions and control often appear as the most important problem in the management of working capital.[15] Inventories are very important for an enterprise management primarily because of their direct impact on its profit. Profits are greatly affected by the inventories.[16] Too much or too little inventory affects the enterprise's rate of return on investment. Inventory in excess of the required amount would result in an increase of costs such as handling and storage, spoilage, obsolescence and capital invested affecting the profit margin. On the other hand, under investment in inventory often causes the firm to fail to meet its delivery schedules with a resultant loss of goodwill. Further the rate at which inventories move through the production and distribution processes also affects the cost of doing business. Therefore, it is important for the management of the enterprise to formulate and initiate proper inventory decisions which would serve as guides in determining the correct level of inventory to maintain and thereby at any one time, the correct amount of working capital to inventory so as to carry on continuous production.

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15 BOGEN, JULES I. (Ed..), Financial Handbook, The Ronald Press Company, New York, 3rd Ed., 1957, p.715.

16 WALKER, ERNEST W. and BAUGHN, WILLIAM H., Financial Planning and Policy, Harper and Row, New York, 1964, p.172.

(i) Inventory Decision

In inventory decision, the enterprise's objectives should be in consonance with the wealth maximisation principle. In order to attain this objective, the enterprise should maintain the optimum level of inventory. The amount of investment in inventory at any time is determined largely by the quantity of inventory required by the enterprise and the rate at which it is turned over during a particular period. Investment in inventory is also influenced by the decisions governing the purchases, the quantum of finished goods which the enterprise desires hold in stock and the method of valuation the enterprise wants to adopt. Inventory policies were presumed to be influenced by the stability of production and demand for the commodity, availability of transportation for raw-materials and supplies, and finished goods, a desire to maintain satisfactory customer service, cost of items held in inventory in terms of maintenance and capital, and the like.[17] However, this section presents an analysis of the factors or bases considered in determining the size of inventory.

Various bases or factors were also taken into account for deciding inventory size in the selected industries. The following Table 5.12 exhibits the responses of the samples as regards the bases or factors considered while deciding the size of inventory:

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17 MIYAN, MD. ALIMULLAH, "Inventory Management in East Pakistan (A Case Study of Selected Firms)", Unpublished Research Project Report, Bureau of Economic Research, University of Dacca, 1970, p. 27.

Table - 5.12

Responses of the Samples regarding the Bases or Factors Considered in Deciding the Size of Inventory

Bases or Factors of Inventory Size Decision / Samples	Corporations	Enterprises	Total
Anticipated Demand for Products	12	19	31 (69)
Lead Time	11	18	29 (64)
Capacity Utilization	9	18	27 (60)
Price of Raw Materials	10	15	25 (55)
Storage Space Facilities	9	15	24 (53)
Cost of Carrying Inventory	11	10	21 (47)
Degree of Obsolescence	5	7	12 (27)
Others: Nature of Business Activities, Raw Materials to be Used, Whether Local or Imported, etc.	3	3	6 (13)

(Figures in brackets are percentages of total number of samples)

The above Table shows the factors considered in deciding the inventory size in order of importance and among the factors considered for deciding the size of inventory, price of raw materials and cost of carrying inventory were treated as accounting while anticipated demand, lead time, storage space, degree of obselescence, capacity utilization and others were treated as non-accounting factors.

Based on Table 5.12, the responses of the samples as regards the extent of accounting and non-accounting bases or factors for decising the size of inventory in the selected industries are also shown in the following Table 5.13:

Table - 5.13

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Bases or Factors Considered in Deciding the Size of Inventory

Bases or Factors for Size of Inventory / Levels of Use	Accounting	Non-Accounting	Total	Level of Significance
Corporations	21 (30)	49 (70)	70 (100)	Chi-Square = 0.830
Enterprises	25 (24)	80 (76)	105 (100)	Not Significant at .05 level.
Total :	46 (26)	129 (74)	175 (100)	

(Figures in brackets are column - percentages).

From the above Table it is clear that 74 percent and 76 percent viewed the factors or bases considered in deciding the size of the inventory as related to non-accounting and accounting information respectively. Of the samples at corporation level, 70 percent and 30 percent viewed the sample factors as related to non-accounting and accounting information respectively. While of the enterprise heads, 76 percent and 24 percent viewed the same factors as related

to non-accounting and accounting information respectively. Then of the samples who viewed the factors as related to accounting, 54 per cent and 46 percent belonged to the categories of enterprise heads and corporations' samples respectively. On the other hand, of the samples who viewed the same factors as related to non-accounting, 62 percent belonged to the category of enterprise heads while 38 percent belonged to the category of corporations' samples.

It is thus evident that the non-accounting information was mostly considered in deciding the size of inventory both at corporation and enterprise levels. But there was no significant relationship between the extent of use of non-accounting information as bases in deciding inventory size and the levels of use (not significant at .05 level). That is, the opinion variation as regards the extent of use of non-accounting and accounting information for deciding the inventory size was independent of the variation in the levels of such use and thus, resulting in overinvestment or under investment in the inventory ultimately affecting the financial performances of the selected industries.

The sound operations of an enterprise depend on the adequacy or otherwise of the size of inventory which are tested by applying different methods. The following Table 5.14 exhibits the responses of the samples as regards methods used for testing the adequacy of the size of inventory in the nationalised industries under study:

Table - 5.14

Responses of the Samples regarding the Methods Applied for Testing Adequacy of the Size of Inventory

Methods Applied for Testing the Adequacy of the Size of Inventory / Samples	Corporations	Enterprises	Total
Number of Months' Value of Production	12	13	25 (55)
Inventory Turnover Ratio	11	11	22 (49)
Safety Stock Technique	5	8	13 (29)
Optimum Inventory or Economic Order Quantity	6	6	12 (27)
Others: Quick Ratio, Time Interest Earned Ratio, etc.	3	7	10 (22)

(Figures in brackets are percentages of Total Number of Samples).

The above Table shows different methods used for the same purpose in the selected nationalised enterprises in order of importance. It thus appears that methods used for testing the adequacy of the size of inventory were based mostly on non-accounting factors than accounting factors. Among the methods applied for testing the adequacy of the size of inventory, turnover ratio quick and time interest ratio were treated as accounting while number of months' value of production, optimum inventory or economic order quantity and safety stock were treated as non-accounting methods.

The adequacy or inadequach of actual inventory at the end of each of the financial years is an important issue for any manufacturing enterprise because of its role in maintaining a smooth production schedule. This can be judged in terms of inventory turnover as well as member of months' value of production. The following Tables 5.15 and 5.16 show the above position:

Table - 5.15

Adequacy Test of Inventory of 245 Enterprises under Selected Industries in Terms of Turnover for the Period Covering 1975-76 to 1979-80

(In Times)

Selected Industries / Years	Jute	Cotton Textile	Sugar and Food	Steel and Engineering	Chemical and Fertilizer	Total (Average)
1975-76	2.21	2.41	2.42	2.56	1.96	2.31
1976-77	2.24	4.12	1.80	3.98	1.77	2.78
1977-78	2.40	4.82	2.52	3.66	3.09	3.31
1978-79	2.15	5.05	3.02	1.74	8.26	4.04
1979-80	2.38	3.31	2.48	1.67	10.76	4.12
Average :	2.28	3.94	2.45	2.72	5.17	3.31

[Activity Ratio: (i) "Inventory Turnover" = $\frac{\text{Sales}}{\text{Inventory}}$ (times)

or (ii) $\frac{\text{Cost of Goods Sold}}{\text{(Average) Inventory}}$]

[Source: Based on Data shown in Appendix II(A) to II (E) attached herewith.]

It is evident from the Table 5.15 that on an aggregate, the industries showed inventory turnover ranging from 2.31 times to 4.12 times of sales and the average for the whole period of study was 3.31 times.

It is also found that the inventory turnover of Jute, Sugar and Food and Steel and Engineering Industries was lower than the average inventory turnover (3.31 time) for the period recording 2.28 times, 2.45 times and 2.72 times respectively. Then, the inventory turnover was also lower than the average inventory in the years 1975-76 and 1976-77 recording on an average, 2.31 times and 2.78 times respectively.

Table - 5.16

Adequacy Test of Inventory of the Selected Industries Covering 245 Enterprises in Terms of "Number of Months' Value of Production" for the Period Under Study

(In Months)

Selected Industries / Years	Jute	Cotton Textile	Sugar and Food	Steel and Engg.	Chemical and Fert.	Total (Average)
1975-76	5.77	4.87	5.12	4.60	6.17	5.31
1976-77	5.13	3.52	5.77	3.15	6.60	4.83
1977-78	4,63	2.50	4.80	3.32	3.62	3.77
1978-79	5.35	3.13	4.13	9.09	1.30	4.60
1979-80	6.30	4.07	5.05	11.35	1.29	5.61
Average :	5.44	3.62	4.97	6.30	3.80	4.83

[Notes: Inventory as "No of Months' Value of Production"

$\frac{\text{Inventory}}{\text{Production}} \times 12$ (months)]

[Sources: Appendix II(A) to II(F).]

Adequacy test of inventory can also be made in terms of 'Number of Monthe' Value of Production'. The Table 4.16 shows the adequacy test of inventory of the selected industries in terms of number of months' value of production for the period under study. It is evident from the Table that the inventory in terms of 'Number of Months' Value of Production' for the period, 1975-76 to 1979-80 showed on an average, 4.83 months while on the aggregate, it varied from 3.77 to 5.61 months. The average inventory (4.83 months) was below the standard of 6 months' value of production. The average inventory in terms of number of months' value of production was also far below the the normal standard in the case of all the industries except Steel and Engineering Industry which recorded 6.30 months and it varied from 3.62 months to 6.30 months on an average.

The above state of affairs signifies the fact that there was under-investment in the inventories hampering the normal production smoothly as well as the supply of finished products to satisfy customers' requirements or demands. It thus ultimately affected the profitability of the industries concerned.

Adequacy or inadequacy of the inventory position had been tested above in terms of inventory turnover as well as number of months value of production, and it was found that there was under investment inventory in all the industries for all periods under review because of various reasons responsible for such a dismal state of affairs which were noted below:

The modern techniques of ascertaining store requirements and stock level such as ABC Analysis, Minimum Safety Levels, Maximum Safety Levels, Danger Levels and Re-order Point were not properly applied which resulted in poor inventory decisions and control in these industries.

It was learnt that the non-availability of qualified and professionally trained financial managers and executives in the enterprises was the main reasons for non-application of the modern techniques. Moreover, the organizational and management climate was such that the qualified personnels who had the knowledge, showed aversion to the application of such techniques.

It was also observed that poor stores management system was another major reason for under-investment of inventory in the industries. Because, managerial inefficiency in maintaining coordination between stores and purchase departments resulted in wrong assessment of stores requirements.

It was further observed that the enterprises failed to procure and maintain required stock levels and proper stores due to the limited purchasing power of the enterprises since directives and manuals of the Corporations in this respects are to be observed. In particular, the materials from outside the country in most cases, were to be procured through the control and guidance of the respective corporations.

It was also often asserted that industrial enterprises did not pay due attention to proper inventory levels and maintenance and, therefore, did not have clearly stated inventory policy.[18]

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[18] MIYAN, MD. ALIMULLAH, "Inventory Management in East Pakistan (A Case Study of Selected Firms)", op.cit., p.19.

(ii) Inventory Control

Controlling inventories is to observe the end results of inventory decision coincided with the predetermined inventory objectives. For this purpose, each step in the inventory process is to be checked with the standard established earlier and if deviations occur, actions must be taken immediately to correct such situation.

There are various traditional methods that have long been used in attempting to control inventories.[19] The first method is the inventory turnover ratio. It is a measure useful for financial analysis of units in an enterprise. Another device used to maintain overall control of inventories is the inventory budget. A budget is usually somewhat more sensitive to short-term control requirements than the turnover ratio because it is predicted on sales forecast and production schedule. Another measure of control is the return on investment. This is useful to top management because it can be used to measure performance against a planned objectives. The objective of inventory stock control methods is to create a balance between the desire to minimize capital investment on the one hand and to avoid extension of the delivery period on the other.[20]

The following Table 5.17 exhibits the responses of the samples as regards the techniques or bases applied for controlling inventory in the selected nationalised industries.

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19 ANDLAUER, EDGAR L., "Inventory Management", Journal of Accounting, August 1959, pp. 25-31.

20 The Institute of Cost and Works Accountants, The Profitable Use of Capital in Industry, Portland Lace, London, 1969, p. 47.

Table - 5.17

Responses of the Samples regarding Techniques Applied for Inventory Control

Techniques Applied for Inventory Control \ Samples	Corporations	Enterprises	Total
Proper Inventory Budget	10	14	24 (53)
Inventory Turnover Ratio	10	12	22 (49)
Return on Investment	3	9	12 (27)
Others: First-in-First Out, Last-in-First Out, Moving or Weighted Average Method, etc.	2	8	10 (22)

(Figures in brackets are percentage of total number of samples)

The above Table shows the same techniques in order of importance and it is evident that all the techniques applied for the same purpose were based on accounting information.

5.3(b) Accounts Receivable Decision and Control

Another important element of working capital is accounts receivables which also require careful analysis. It is the current asset arising out of credit sales to customers which would be paid off in the normal course of business. But until that point, receivables are, in a sense, forzen assets. A more vigorous attempt to collect from customers may require either terms of sale as to hamper the competitive position of the firm or to use of costly cash discounts.[21]

21 Federal Reserve Bank of Chicago, "Accounts Receivable Lending Credit at the Margin", Business Conditions, March 1958, pp.5-12.

Accounts receivables here include debtors, advances and loans together. The basic objective of receivable management is to maximize return on investment in this asset. Accounts receivable decision refers to decision as regards the amount of funds to be invested in this asset as a part of the interval short-run operating process.[22] The total volume outstanding at any one time is determined by the enterprise's credit and collection policies which significantly influence the working capital requirements.

Amount of capital invested in accounts receivables has opportunity costs. Generally an increase in receivables investment results from several reasons : an increase in sales, size of cash discount, length of credit terms and the volume of delinquent accounts.[23] Excessive investment in receivables would amount to denial of funds for more profitable and remunerative uses. Excessive tie-up in outstanding is a proof of incompetence for management too upon ultimate failure of the clients. As such, a good receivable policy is said to be one which has a reasonable credit and collection period. Some authors[24] opined that an average collection period of 20 days to 60 days is a reasonable norm.

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22 BRANDT, LOUIS K., Business Finance : A Management Approach, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1965, p.104.

23 WALKER, E.W., Essential of Financial Management, op.cit., p.68.

24 MOHSIN, M., Financial Planning and Control, op.cit., p. 194; HAMPTON, JOHN J., Financial Decision Making : Concepts Problems and Cases, op.cit., p.154 and WESTON, J. FRED AND BRIGHAM, F. EUGENE, Managerial Finance. op.cit., p.66.

The purpose of this section is to examine the vital function and the means bywhich receivables can be managed efficiently by the use of accounting information so that the level of investment in them is optimal. In this context, both the credit and collection policies and procedures as a whole of the enterprises under selected industries had been discussed.

The following Table 5.18 shows the average collection period (in days) for the nationalised industries under study to judge the adequacy or otherwise of the actual amounts invested in accounts receivable of the selected industries at the end of each of the selected financial years, 1975-76 to 1979-80:

Table - 5.18

Adequacy Test of Accounts Receivables in Terms of Receivables Turnover or Average Collection Period (in Days) for the Selection Industries Covering 245 Enterprises for the Period, 1975-76 to 1979-80

(In days)

Selected Industries / Years	Jute	Cotton Textile	Sugar and Food	Steel and Engg.	Chem. and Fert.	Total (Aver.)
1975-76	96	61	65	76	252	110
1976-77	102	84	73	70	237	113
1977-78	89	107	52	77	215	112
1978-79	127	125	80	85	225	128
1979-80	145	136	92	96	210	136
Average :	112	103	72	81	228	120

[Notes: (i) Activity Ratio or Average Collection Period

$$= \frac{\text{Receivables or Trade Debtors}}{\text{Credit Sales}} \times 365 \text{ Or } \frac{\text{Receivables}}{\text{Sales Per Day}}$$

(ii) Total column repeesents the average position of all the industries under study.]

[Source: Annual Reports of the Selected Industries for the Period, 1975-76 to 1979-80.]

The Table shows that during the study period in the aggregate, the average collection period was 120 days which was much higher than the standard norm of 20 days to 60 days thus indicating over investment in receivables and resulting in high costs for maintaing these receivables. The reasons for this dismal condition might be identified as liberal extention of credit sales, non-consideration of past figures or credit sales and their realization, delays in collection, lack of accurate decision on credit terms, credit risks, cash discount, etc.

In order to decide the size of accounts receivables, certain factors or bases need to be taken into consideration. The following Table 5.19 exhibits the responses of the samples as regards the different bases or determinants considered while deciding the size by accounts receivables in the selected nationalised industries:

Table - 5.19

Responses of the Samples regarding the Bases or Factors Considered in Deciding Size of Accounts Receivables

Bases or Factors Considered in Deciding Size of Accounts Receivables / Samples	Corporations	Enterprises	Total
Credit Terms or Policy	12	8	29 (44)
Collection Period	3	8	11 (24)
Cash Discount	5	5	10 (22)
Selection of Credit Risks	6	3	9 (20)

(Figures in brackets are percentages of total number of samples),

The above Table shows the factors considered for the same purpose and these in order of importance were: credit terms or policy (44 percent), collection period (24 percent), cash discount (22 per cent) and selection of credit risks (20 percent). It is to be mentioned here that sales on credit were not generally allowed in the selected nationalised industries. Among the factors considered in deciding the size of accounts receivable, cash discount was treated as accounting factor while credit terms or policies, selection of credit risks and collection period were treated as non-accounting factors. Thus, factors considered here covered more of non-accounting information than accounting factors or information.

Based on Table 5.19, the responses of the samples as regards the extent of accounting and non-accounting bases or factors considered while deciding the size of accounts receivables in the selected industries are shown in the following Table 5.20:

Table - 5.20

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Bases or Factors for Deciding the Size of Accounts Receivables

Factors for Deciding Size of Accounts Receivables / Levels of Use	Accounting	Non-Accounting	Total	Level of Significance
Corporations	5 (19)	21 (81)	26 (100)	Chi-Square=0.020
Enterprises	5 (21)	19 (79)	24 (100)	Not Significant at .05 level.
Total :	10 (20)	40 (80)	50 (100)	

(Figures in brackets are column-percentages).

It is clear from the above Table that 80 percent of the samples viewed the factors or bases considered in deciding the size of accounts receivables as related to non-accounting information while only 20 percent of them viewed the same factors as related to accounting information. Of the samples at corporation level, 81 percent and 19 percent viewed the factors as related to non-accounting and accounting information respectively while of the enterprise heads, 79 percent and 21 percent viewed the factors for accounts receivable size as related to non-accounting and accounting information respectively. Then, of the samples who viewed the factors as related to non-accounting, 53 percent and 47 percent belonged to the categories of corporations' samples and enterprise heads respectively while of the samples who viewed the factors as related to accounting, 50 per cent and 50 percent belonged to the categories of corporations' samples and enterprise heads.

It is thus there was high use of non-accounting information as bases in deciding the size of accounts receivables both at corporation and enterprise levels. Moreover, there was no significant relationship between the extent of use of such non-accounting information as bases in the same purpose and the levels of use (not significant at .05). That is, the opinion variation as regards the extent of use of non-accounting and accounting information as bases in deciding the size of accounts receivables was independent of the variations in the levels of use and thus, resulting in defective credit and collection policies affecting ultimately the profitability of the industrial enterprises under study.

(i) Credit and Collection Policies

Credit and collection policies have far-reaching effects on financial conditions, sales volume, customer relation and production. Therefore, decisions regarding credits should not be left to chance, rather these decisions should be made by top management on the basis of factual data to ensure uniformity of action and to achieve an optimal credit policy. While formulating the credit and collection policies, the management should consider many factors like credit terms, selection of credit risks and cash discounts. The basic liquidity goals in receivables decisions concentrate on:[25] (i) prospect of collecting receivables when they become due and (ii) prospect of shortening future receivables at maturities. In other words, liquidity increases with the certainty of collecting the receivables at maturity and liquidity decreases with uncertainty of collecting the receivables at maturity.

The soundness of credit and collection policies depends on the adequacy or otherwise of the size of accounts receivables. The following Tables 5.21 exhibits the responses of the samples as regards the methods applied for testing the adequacy or otherwise of the size of accounts receivables in the selected nationalised industries:

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25 KUCHHAL, S.C., Financial Management : An Analytical and Conceptual Approach, Chaitanya Publishing House, Allahabad, 8th Ed., 1982, p.205.

Table - 21

Responses of the Samples regarding the Methods Applied for Testing the Adequacy of Accounts Receivables

Methods Applied in Testing Adequacy of Accounts Receivables \ Samples	Corporations	Enterprises	Total
Accounts Receivables Turnover	16	14	30 (67)
Average Collection Period	14	11	25 (55)
No Response	-	7	7 (15)

(Figures in brackets are percentages of total number of samples).

The above Table shows that 67 percent and 55 percent of the samples reported that accounts receivables turnover and average collection period methods were applied for testing the adequacy or otherwise of the accounts receivables in the selected nationalised enterprises. Since there was no policy to make sales on credit, 15 percent of the samples gave no reply to this query. Of the methods applied for testing the adequacy of accounts receivables, accounts receivables turnover was treated as accounting while average collection period was treated as non-accounting method. But the methods applied for testing the adequacy or otherwise of accounts receivables were based mostly on accounting information than non-accounting information.

(ii) Control of Accounts Receivables

The effectiveness of credit and collection policies is also largely dependent on the degree of control made by the top management. For this purpose, complete information regarding the perfor-

mance of each control technique employed in this area of operation is absolutely essential. To get the desired information, the management is required to receive periodic reports from the individuals who actually perform the credit and collection functions which reveal: (a) receivables turnover, (b) percentage of collection, (c) ratio of bad debts to sales and (d) ratio of deliquent accounts to sales and an analysis of these reports by top management serves as a basis for the evaluation of the firm's credit and collection policies.[26]

However, in order to control accounts receivables certain methods are applied. The following Table 5.22 shows the responses of the samples as regards the methods applied for control of accounts receivables in the selected nationalised industries:

Table - 5.22

Responses of the Samples regarding Methods Applied for Control of Accounts Receivables

Methods Used for Control of Accounts Receivables \ Samples	Corporations	Enterprises	Total
Receivables Turnover	10	15	25 (55)
Percentage of Collection (or Collection Period)	11	11	11 (49)
Ratio of Bad Debts to Sales	5	3	8 (18)
No Response	-	7	7 (15)

(Figures in brackets are percentages of total number of samples).

26 WALKER, ERNEST W. and BAUGHN, WILLIAM H., Financial Planning and Policy, Harper and Row, New York, pp. 202-208.

Table 5.22 shows some methods used in our nationalised enterprises and these in order of magnitude were: receivables turnover (55 percent), percentage of collection or collection period (49 percent) and ratio of bad debts to sales (18 percent). It is to be mentioned here that since no credit sale was usually allowable in nationalised enterprises, some respondents recording 15 percent gave no reply or response to this question. Of the methods applied for control of accounts receivable, receivables turnover and ratio of bad debt to sales were treated as accounting while percentage of collection was treated as non-accounting method.

5.3(c) Cash Decision and Control

Cash is another important elements of current assets. Because of its liquidity, it also plays a dominant role in the operating period of an enterprise. One of the important functions of financial management is to manage cash properly. Because insufficient cash is harmful to the good operating health of the enterprise and a liberal maintenance of cash may inspire a sense of security.[27] It is possible for an enterprise to go bankrupt even if it is doing well since a rapid increase in sales would involve heavy expenditure on stocks and the extension of credit thereby would affect the cash reserves. On the other hand, if idle cash reserves are built up, it indicates that investment opportunities are being missed and the business may be stagnating.[28] Then since cash-in-hand is a non-recurring assets, the

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27 SHARMA, B.S., Financial Planning in the Indian Public Sector-A Management Approach. Vikas Publishing House Private Limited, Delhi, 1974, p.35.

28 WILSON, R.M.S., Financial Controls - A System Approach. Mcgraw-Hill Book Company (U.K.) Ltd., England, p.73.

liberal maintenance of cash is to be guarded against so that it cannot go beyond some optimum level.

As regards optimum level of cash to be maintained by an enterprise it is not easy to lay down any rigid formula because there are many factors which influence the optimum level and no standard can be set for the purpose. Of course, experience shows that sound enterprises always have cash sufficient to cover all current indebtedness. Past trends and achievements, industry averages and inter-firm comparisons can provide some useful indications in this respect.[29] One author opines that management should project the future cash receipts and cash payments of the enterprise with various cash balances, subtract the payments from the receipts to calculate net cash flows, and then select that cash balance which maximizes the present value of the net cash flows.[30]

Various bases or factors are taken into account for deciding cash requirements. The following Table 5.23 exhibits the responses of the samples regarding the various bases or factors which were taken into consideration while deciding cash requirements in the selected nationalized industries:

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29 GUTHMANN, H.G. and DOUGALL H.E., Corporate Financial Policies, op. cit., p.85.

30 BOUDEN HORN, DIRAN, "A Cash Flow Concept of Profit", Journal of Finance, Vol. XIX, No. 1, March 1964, p.18.

Table - 5.23

Responses of the Samples regarding the Bases or Factors Considered in Deciding Cash Requirements

Bases of Cash Requirements Decision / Samples	Corporations	Enterprises	Total
Past Experience Based on Historical Information	10	20	30 (67)
Preparation of Cash Forecasts	12	17	29 (64)
Use of Balance Sheet Data	10	18	28 (62)
Nature of Business Enterprise	13	13	26 (58)
Nature of Inventory	8	16	24 (53)
Credit Policy of the Enterprise	8	9	17 (38)
Seasonal Requirements	9	6	15 (33)
Volume of Sales in Relation to Fixed Assets	8	6	14 (31)
Status of Enterprise's Receivables	6	3	9 (20)
Procedure of Payment of Current Liabilities	2	6	8 (18)
Collection of Cash Network System	2	5	7 (15)
Others: Wage Payment System	2	4	6 (13)
Sales Policy	3	2	5 (11)
Purchase Policy	2	2	4 (9)

(Figures in brackets are percentages of total number of samples).

It is evident from the above Table that various bases or factors considered for the purpose were shown in order of importance. Of the factors considered in deciding cash requirements, past experience based on historical information, use of balance sheet

data and volumn of sales in relation to fixed assets were treated as accounting factors while the remaining factors were treated as non-accounting ones. It is thus observed that factors considered in deciding the cash requirements covered both the accounting and non-accounting information, of them non-accounting information or factors were given more importance than the accounting ones.

Based on Table 5.23, the responses of the samples as regards the extent of accounting and non-accounting factors considered for deciding cash requirements in the selected industries are also shown in the following Table 5.24.

Table - 5.24

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Bases or Factors for Deciding Cash Requirements

Factors for Cash Requirements Decision / Levels of Use	Accounting	Non-accounting	Total	Level of Significance
Corporations	28 (29)	67 (71)	95 (100)	Chi-Square = 0.663
Enterprises	44 (35)	83 (65)	12 (100)	Not Significant at .05 level
Total :	72 (32)	150 (68)	222 (100)	

(Figures in brackets are column - percentages).

It is clear from the above Table that 68 percent and 32 percent of the samples viewed the factors considered for deciding cash requirements as related to non-accounting and accounting information respectively. Of the samples at corporation level, 71 percent and 29 per cent viewed the same factors as related to non-accounting and accounting information while of the enterprise heads, 65 percent and 35 per cent viewed the same factors as related to non-accounting and accounting information respectively. Then on the other hand, of the samples who viewed the factors as related to non-accounting, 55 percent and 45 percent belonged to the categories of enterprise heads and corporations' samples respectively while of the sample who viewed the factors as related to non-accounting 61 percent and 39 percent belonged to the categories of the enterprise heads and corporations' samples respectively.

It is thus evident from the opinion of the respondents that there had been high use of non-accounting information as bases in deciding the cash requirements both at corporation and enterprise levels. Moreover, there was no significant relationship in the extent of use of non-accounting information as bases for the same purpose and the levels of such use (not significant at .05 level). That is, the opinion variation as regards the extent of use of non-accounting and accounting information as bases in deciding the cash requirements was independent of the variations in the levels of such use and thus, resulting in shortage of required amount cash affecting the financial performances of the identified industries.

(i) Cash Decision

Cash requirements decision is done through different techniques which are applied to decide for and control the use of such cash. These techniques disclose the financial condition of the enterprise by developing a project cash statements from a forecast of expected cash inflows and outflows for a given period. The forecasts may be based on the present operations, historical accounting information of financial statements, and the anticipated future operations. Cash budget is one such significant device to decide for and control the cash receipts and payments. A cash budget is a summary statement of the enterprise's expected cash inflows and outflows over a project period. These information help the financial manager to determine the future cash requirements of the enterprise to decide for the financing of these requirements and exercise control over cash and liquidity of the enterprise.[31]

In order to assess the usefulness of cash budgeting system in the nationalised industries, original and revised cash budget estimates and actual cash and bank balance at the end of the selected financial years has been presented in the Table 5.25 given below:

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31 VANHORNE, JAMES, C., Financial Management and Policy, op. cit., p.665.

Table - 5.25

Actual and Budgeted (Original and Revised) Cash and Bank Balances of 245 Enterprises Under the Selected Industries for the Period Covering 1975-76 to 1979-80

(In Million Taka)

Selected Industries / Years	Jute			Cotton Textile			Sugar and Food			Steel and Engineering			Chemical and Fertilizer		
	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual
1975-76	90	60	56	122	100	85	52	55	48	140	140	63	142	36	24
1976-77	93	80	64	114	100	90	77	61	50	201	201	175	117	134	38
1977-78	146	103	80	140	130	100	(334)	(350)	64	94	77	127	94	114	(74)
1978-79	160	138	102	152	124	150	(350)	(387)	82	17	31	108	53	79	52
1979-80	175	150	137	165	153	49	(175)	(311)	63	51	17	142	63	68	20
Average:	133	106	86	139	121	95	(146)	(186)	61	101	93	123	94	86	12
%	35.33	18.87		31.65	21.49		(58.22)	(67.20)		—	—		87.23	86.60	

[Source: Based on Data shown in Appendices: II(A) to II(E) and IV(A) to IV(B).]

It is evident from Table 5.25 that actual cash and bank balance at the end of each selected years was lower than the budgeted (both original and revised) figures in all the industries except Steel and Engineering Industry. The variance between actual cash and bank balance with original budget estimate and that of between cash and bank with revised budget estimate on an average, was 35.33 percent and 18.87 percent respectively in Jute Industry, 31.65 percent and 21.49 percent respectively in Cotton Textile Industry, 58.22 percent and 67.20 percent respectively in Sugar and Food Industry, 87.23 per cent and 86.60 percent respectively in Chemical and Fertilizer Industry. It is also observed that the actual amount of cash and bank balance of Steel and Engineering Industry was higher than the original and the revised budget estimates by Tk. 22 million and Tk. 30 million recording 21.78 percent and 32.25 percent respectively. The identified variances in cash budgets indicate ineffective cash budgeting in the selected industries.

The above state of affairs in all the industries except Steel and Engineering Industry indicate that the cash receipts were much lower than the budgeted figures and the cash disbursements were much higher than the budgeted figures. Moreover, the other possible reasons for above adverse position were poor collection policy and liberal credit sales policy. The ultimate result was unsound cash receipt and cash disbursement policies leading to unrealistic cash budgeting in the major selected industries.

(ii) Cash Control

The control of cash in an enterprise is imperative since there is a moral, legal and economic obligation on the part of management to meet its commitments. It is possible only when operating functions move according to decisions made and this is reflected in the inflow and the outflow of cash. Cash control is essential to meet the working capital requirements smoothly. For this purpose certain methods are usually applied. The following Table 5.26 exhibits the responses of the samples as regards the various methods used for cash control and evaluation in the selected nationalized industries.

Table - 5.26

Responses of the Samples regarding the Methods Applied for Cash Control

Methods Applied for Cash Control / Samples	Corporations	Enterprises	Total
Cash Budget	15	23	38 (84)
Cash Flow Statement	13	16	29 (64)
Financial Reports	8	17	25 (55)
Ratio Charts	9	7	16 (35)
Bank Reconciliation Statements	3	7	10 (22)
Break-Even Points/Charts	4	4	8 (18)
Others: Timely Deposit of Cash in Bank, Physical Verification of Cash Balance with Cash Book, Cast Receipts and Payments to be Verified, Maintaining Optimum Cash Balance, etc.	1	5	6 (13)

(Figures in brackets are percentages of total number of samples).

The above Table shows the methods used for the same purpose in the selected nationalised enterprises in order of importance. It is evident that among the methods, cash budget and cash flow statement were widely practised. However, all the methods used for the cash control were based on accounting information.

5.4 Working capital Financing Decision

There are various sources of financing to meet working capital requirements in an enterprise. The following Table 5.27 exhibits the responses of the samples as regards the various sources of finance used to meet the working capital requirements in the nationalised industries under study:

Table - 5.27

Responses of the Samples regarding Sources of Financing Working Capital

Sources of Financing Working Capital / Samples	Corporations	Enterprises	Total
Bank Short-term Borrowings	17	20	37 (82)
Bank Long-Term Borrowings	8	11	19 (42)
Trade Dues and Sundry Creditors	9	8	17 (38)
Equity	2	12	14 (31)
Non-Bank Short-term Borrowings	2	7	9 (20)
Retained Earnings	3	5	8 (18)

(Figures in brackets are percentages of total number of samples).

There were various sources of financing the working capital of the selected nationalised enterprises and as evident from Table 5.27 the sources in order of importance were: bank short-term borrowings (82 percent), long-term borrowings (42 percent), trade dues and sundry creditors (38 percent), equity (31 percent), non-bank short-term borrowings (20 percent) and retained earnings (18 percent). Of the various sources of finance, bank short-term borrowings and long-term borrowings had been termed as institutional while remaining sources viz., trade dues and sundry creditor, equity, non-bank short-term borrowings and retained earnings had been termed as non-institutional sources. It is thus evident that there was high use of both, institutional and non-institutional finance.

Various bases or factors however, were considered important in working capital financing decisions of the selected nationalized industries. The following Table 5.28 exhibits the responses (or factors) considered in deciding working capital finance.

Table - 5.28

Responses of the Samples regarding the Bases or Factors Considered in Working Capital Financing Decision

Bases of Working Capital Financing Decision \ Samples	Corporations	Enterprises	Total
Liquidity	16	17	33 (73)
Existing Debt-Equity Ratio	14	18	32 (71)
Profitability	15	16	31 (69)
Actual Profit Earned	14	15	29 (64)
Reserve Position	13	13	26 (58)
Growth or Sales	12	12	24 (53)
Management Efficiency	13	10	23 (51)
Security of Capital	12	10	22 (49)
Total Net Worth	10	10	20 (44)

(Figures in brackets are percentages of total number of samples)

It is evident from the above table that there were various factors/bases taken into account for the same purpose which were shown in order of importance. Among the identified factors, liquidity, profitability, existing debt equity, ratio, reserve position, actual profit earned and total networth were termed as accounting factors while growth (sales), management efficiency and security of capital were termed as non-accounting factors. Thus, both accounting and non-accounting factors were considered for deciding working capital financing source, among which accounting factors outweighed the non-accounting factors.

Based on Table 5.28, the responses of the samples as regards the extent of accounting and non-accounting bases or factors in deciding working capital finance in the selected nationalised industries are shown in the following Table 5.29.

Table - 5.29

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Bases or Factors in Deciding Working Capital Finance

Bases or Factors in Deciding Working Capital Finance / Levels of Use	Accounting	Non-accounting	Total	Level of Significance
Corporations	82 (69)	37 (31)	119 (100)	Chi-Square = 0.634
Enterprises	89 (74)	32 (26)	121 (100)	Not significant at .05 level
Total :	171 (72)	69 (28)	240 (100)	

(Figures in brackets are column-percentages).

From the above Table it is clear that 71 percent of the samples perceived the factors considered for working capital financing as related to accounting information while remaining 29 percent of the samples perceived the factors as related to non-accounting information. Of the samples at corporation level, 69 percent and 31 percent perceived the factors as related to accounting and non-accounting information respectively while of the enterprise heads, 74 percent and 26 percent perceived the factors as related to accounting and non-accounting information respectively. Then of the samples who viewed the factors as related to accounting, 52 percent and 48 percent belonged to the categories of enterprise heads and corporations' samples while of the samples who viewed the same factors as related to non-accounting, 54 percent and 46 percent belonged to the categories of corporations' samples and enterprise heads.

It is thus evident from the opinion of the respondents that there was tremendous use of accounting information or factors in deciding working capital financing both at corporation and enterprise levels. But there was no significant relationship between the extent of use of accounting information or factors and the levels of use (not significant at .05 level). That is opinion variations as regards the extent of use of accounting and non-accounting information or factors in deciding working capital finance was independent of the variations in the levels of use and thus resulting in excessive short term institutional finance for meeting working capital requirements ultimately affecting the financial performances of the industries under study.

5.5 Evaluation and Control of Working Capital

The present section deals with the evaluation and control of working capital which is inevitable for efficient and effective operations of business activities of the industries. Reduction of working capital requirements would lead to the control of expenses to be incurred for purchasing raw materials, stores and spares, meeting operational expenses and paying dividends, and other dues and this inversely leads to the control and evaluation of working capital. The problem of working capital control would be minimised to a great extent if an enterprise can correctly and properly plan its requirements, structural components and sources of financing of such working capital. The direct approach to working capital control is to develop a sound policy for each of the above issues. It has been observed from the analysis of the working capital requirements, structural components and financing of working capital in the previous sections that the nationalised industrial enterprises under study could not maintain adequate amount of working capital, enjoy sound and effective inventory, accounts receivables and cash policies, and procure non-institutional finance due to various reasons as noted in the respective sections.

In order to evaluate the effectiveness or otherwise of the decisions regarding working capital, the following Table 5.30 showing the comparative figures of the budgeted (original and revised) and the actual gross working capital had been presented.

Table - 5.30

Evaluation of Budgeted (Orginal and Revised) and Actual Working Capital in the Selected Indus
245 Enterprises for the Period, 1975-76 to 1979-80

Selected Industries / Years	Jute			Cotton Textile			Sugar and Food			Steel and Engin	
	Budgeted		Actual	Budgeted		Actual	Budgeted		Actual	Budgeted	
	Original	Revised		Original	Revised		Original	Revised		Original	Revised
1975-76	3336	3121	2233	1603	1646	1537	1657	1655	982	1486	1560
1976-77	3354	3944	2256	2372	2106	1403	1721	1862	1276	1993	1993
1977-78	4326	5627	3072	2607	2611	2231	1742	1769	1303	1932	2096
1978-79	5524	4517	3399	3102	2816	2307	1843	2555	1214	2509	2599
1979-80	5252	5298	4575	3812	3256	2333	2179	2279	1525	3362	3022
Average :	4358	4501	3147	2699	2487	1962	1828	2024	1260	2256	2254

[Source: Based on Tables 5.5 and 5.6]

It is evident from the above Table that in all the industries except Chemical and Fertilizer, actual gross working capital at the end of each of the years had been lower than the both the original and revised budget estimates of working capital. The deviations between the average actual and original estimates and average actual and revised estimates for the period, 1975-76 to 1979-80 were: 27.79 per cent and 30.08 per cent respectively in Jute Industry; 27.01 per cent and 21.11 percent respectively in Cotton Textile Industry; 31.07 per cent and 37.74 per cent respectively in Sugar and Food Industry and 19.06 per cent and 18.99 per cent respectively in Steel and Engineering Industry. On the otherhad, the increase of average actual working capital over average original and revised estimates for the study period in Chemical and Fertilizer Industry was 19.59 per cent and 21.09 percent respectively.

The probable reasons for lower actual (gross) working capital of the industries mentioned above were consideration of more non-accounting information and hunches in deciding working capital requirements as identified earlier leading to shortage of required working capital in these industties and ultimately affecting the financial performances of these industries.

Further, in order to evaluate the effectiveness or otherwise of the working capital decisions regarding requirements, structural components and sources of finance the following Table 5.31 showing the comparative figures of budgeted and actual total costs of production had been presented.

Table - 5.31

Evaluation of Total Costs of Production (Budgeted and Actual) of 245 Enterprises under the Selected Nationalised Industries for the Period Covering 1975-76 to 1979-80

(In Million Taka and %)

Selected Industries / Years	Jute			Cotton Textile			Sugar and Food			Steel and Engineering			Chemical and Fertilizer		
	Budgeted	Actual	Increase %	Budgeted	Actual	Increase %	Budgeted	Actual	Increase %	Budgeted	Actual	Increase %	Budgeted	Actual	Increase %
1975-76	2517	3301	31.15	1470	1609	9.45	1025	1101	7.41	895	1038	15.98	975	1150	17.95
1976-77	2687	3682	37.03	1565	1897	21.21	1139	1486	30.46	1207	1413	17.07	1153	1681	45.79
1977-78	3805	5125	34.69	1780	2093	17.58	1651	1728	4.66	1170	1370	1709	1530	2045	33.66
1978-79	4453	5478	23.02	3102	2315	(25.37)	1813	1773	(2.21)	2649	1996	(24.65)	1957	2400	22.64
1979-80	5098	5833	14.42	3812	2488	(34.73)	1940	1828	(5.77)	3014	2504	(16.92)	2776	2966	6.84
Average :	3712	4684	26.18	2346	2080	(11.34)	1514	1583	5.22	1787	1664	(6.88)	1678	2048	22.05

[Sources: Based on data shown in Appendices II(A) to II(E) and IV(A) to IV(E) attached herewith.]

[Notes : (i) Increase of actuals over budgeted costs, expressed in percentages and (ii) Percentage figures in parentheses indicate that the actual costs did not increase over the budgeted costs to the some extent, thereby with no relevancy for the purpose.]

It is evident from the said Table that the actual total cost of production wherein major working capital element like inventory is also included, increased in Jute, Sugar and Food and Chemical and Fertilizer Industries with average increase of 26.18 per cent, 5.22 percent and 22.05 percent respectively. On the other hand, it was also found that the actual total cost of production was lower than the budgeted total cost of production in Cotton Textile and Steel and Engineering Industries with average decrease of 11.34 per cent and 6.88 per cent respectively.

There were various reasons or factors which were responsible for wide variance between the budgeted and the actual cost of production in the selected industries. The followint Table 5.32 exhibits the responses of the samples as regards the reasons or factors causing the variance between the budgeted and the actual total cost of production of 245 enterprises under selected industries for the period, 1975-76 to 1979-80.

Table - 5.32

Responses of the Samples regarding the Reasons or Factors Responsible for Wide Variance Between Budgeted and Actual Total Cost of Production

Reasons or Factors for Variance Between Budgeted and Actual Cost of Production / Samples	Corporations	Enterprises	Total
Price Escalation of Raw Materials, Stores, and Spares at home and Abroad	13	21	34 (75)
Shortage of Non-Availability of Raw Materials, Stores and Spare Parts	14	17	31 (69)
Unsound Inventory Decision & Control	9	14	23 (51)
Idle Capacity due to Power Failure, Mechanical Trouble, Shortage of Materials, etc.	10	11	21 (47)
Intuition-based Working Capital Requirements Decision	7	12	19 (42)
Shortage of Required Amount of Cash	5	9	14 (31)
Poor Credit and Collection Policies	4	8	12 (27)
Lack of Proper Maintenance	2	5	7 (15)

(Figures in brackets are percentages of total number of samples).

The above Table shows various reasons or factors as identified by the samples for variance between the budgeted and the actual total cost of production in order of importance. It thus evident that the above reasons or factors identified for wide variance between budgeted and actual cost of production were related with non-accounting information. Among the factors identified, some reasons could be eliminated and controlled to a great extent at the corporation and enterprise levels. Factors beyond the control of the corporation and the enterprises could have been taken care of at other levels of administration.

From the analysis of the related issues of working capital in the above sections, it was evident that the use made by management of accounting information in variables related with working capital decisions and control on the whole, seemed to be low and unsatisfactory in the selected nationalised industries for the period under study. It was evident from the earlier sections that decisions regarding working capital requirements, structural components and financing of working capital, all were made mostly on the basis of non-accounting information, hunches and intuition rather than using accounting information. It was also observed that there were shortage of required working capital, inappropriate and ineffective inventory, accounts receivable and cash decisions, great reliance on borrowed capital followed by exhorbitant amount of interest, and absence of any appropriate and effective cost and budgetary control programme thus affecting to a great extent, the very profitability of the industries under study. However, the extent of use of accounting information in the six areas of working capital decisions and control, viz., working capital requirements decision, inventory decision, accounts receivable decision, cash decision, wrorking capital financing decision and working capital control delineated in the earlier sections and the impact of such use or otherwise on the profitability of the selected industries had been examined in Chapter - 8 (eight).

CHAPTER - 6

PROFIT DECISIONS AND USE OF ACCOUNTING INFORMATION

In addition to the already discussed decision areas, determination of income is another important financial decision issue taken up at the expansion phase of an industry. This is generally known as profit decisions and control, in other words, the profit management or planning. The present chapter focuses on the management use of accounting information in different areas of profit decisions and control.

6.1 Concepts and Objectives of Profit Decisions

Profit decisions draw attention on the effectiveness and efficiency of an enterprise. Effectiveness seeks to measure how an enterprise is utilizing its resources to achieve the desired objectives — both economic and social, and efficiency on the other hand as an economic measure, forces organizational efforts to realize greater benefits by rationing out the scarce resources and utilizing minimum resources.[1] Management may be economically efficient but may not be objectively effective. On the other hand, management might achieve organizational desired objectives through inefficient costs. Both are not desirable. Profit decisions and control are organizational programme to realise both effectiveness and efficiency simultaneously.[2]

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[1] GRAY, JACK and JOHNSTON, KENNENT S., Accounting and Management Action, McGraw Hill Book Co., New York, Second Ed., 1979. pp.2-4; SPEIGHT, H., Economics and Industrial Efficiency, Macmillan and Company Ltd., London, 2nd Ed., 1967, p.4 and ROSS, JOELE, Management by Information System, Prentice-Hall, Inc., Englewood Cliffs, New Jersy, 1970, p.303.

[2] GRAY, JACK and JOHNSTON, KENNENT S., op. cit., p.5.

The term 'profit decisions and control' has been defined as the process of so conducting operations as to realize a given profit target, an aspect of an overall budget in which the more important factors affecting sale price, sales volume, prices of cost elements, operating efficiency, etc. are related to profits, and ultimately a plan is prepared which sets forth a desired, presumably attainable balance between these factors.[3] Deciding the profit is a tool in which the expected level of profit is budgeted for and controlling the profit is a tool in which actual level of profit is compared with budgeted profit and analysis of the factors responsible for the discrepency between these two is made in order to undertake measures to rectify the position.[4]

In recent years the term "comprehensive profit decisions and control" has been extensively used in the literature of business as against profit decisions and control. So it also needs some clarification before we go further. This comprehensive term has been defined as : systematic and formalized approach for accomplishing decision-making, coordination, and control functions of management, and specifically, it involves the development and application of (1) a broad and long-range objectives for the enterprise, (2) a specification of enterprise goals, (3) a long-range profit plan developed in broad term, (4) a short-range profit plan detailed by divisions, products and projects, (5) a system of periodic performance reports detailed

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[3] KOHLER, ERIC L., A Dictionary for Accountants, Prentice-Hall of India Private Ltd., New Delhi, 5th Ed., 1979, p.380.

[4] CLAY, M.J. and WALLEY, B.H., Performance and Profitability : A Manual of Productivity and Cost Reduction Techniques for Industry and Commerce, Longman Green, London, 1965, p.365.

by assigned responsibilities and (6) a follow-up procedure.[5] This definition thus, recognises management as the critical success factor in the long-run destiny (i.e., profit) of the enterprise.

Profit decisions and control have also a unique relationship to the accounting system of the enterprise in the following respect.[6] (1) accounting provides historical accounting information that are particularly relevant for decision purposes in the development of an enterprise profit and other plans, (2) the financial component of a profit plan is generally structured in an accounting format and (3) actual data utilized in the measurement of performances (i.e., actual data are compared with planned data) are provided by the accounting system. As such, a profit decisions and control programme can be developed and adopted in any particular accounting system.

The broad concept of profit decisions and control entails an integration of numerous managerial approaches and techniques such as sales forecasting and sales target, capital budgeting, cash flow analysis, cost-volume-profit analysis, variable budgets, time and motion study, standard cost accounting, strategic planning, production planning, inventory control, management by objectives, organizational planning, manpower planning and cost control.[7] Thus, profit decisions are not an accounting concept and technique alone but more than one discipline are involved in it.

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[5] WELSCH, GLENN A., Budgeting : Profit Planning and Control, Prentice Hall of India Private Ltd., New Delhi, 4th Ed., 1981, p.3.

[6] Ibid, p.4.

[7] Ibid., p.6.

The major benefits an enterprise may obtain from formal profit decisions include the following:[8]

Firstly, formalization and documentation of profit decisions communicate the objectives and strategies of the organization to all levels of management. Secondly, the profit decisions process helps the opportunity for careful and complete consideration of a variety of alternatives. Thirdly, formal profit decisions make possible the identification of problems before they become crises. Finally, qualified and documented profit decisions provide standards for the measurement of performances.

As regards the objectives, profit decisions are the name given to the use of forecasts of profits for the purpose of (a) increasing the earnings of the enterprises and (b) preserving the integrity of the capital investment.[9] The main objective of the profit decisions is to project in written form a scheme of business operations that would help maximize profits of the enterprises.

The profit decisions, however, are the embodiment of all the standards of performances, accountability and profit. Such decisions are flexible and follow the general format of an income statement. The profit decisions might be applicable at any time, regardless of sales volume or profit mix and might furnish the basis for a ready analysis of deviations from the established objective i.e. increasing returns on investment and returns on capital employed.[10] However,

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8 BEYER, ROBERT and TRAWICKI, DONALD J., Profitability Accounting. John Wiley and Sons, New York, 2nd Ed., 1972, pp.190-191.

9 BOGEN, JULES I., Financial Handbook. The Ronald Press Company, New York, 3rd Ed., 1957, p.687.

10 BURN, T.J. (ed.), The Use of Accounting Data in Decision-Making. op.cit., p.232.

the concept of this decisional area for the purpose of the study would cover, inter alia, the determination of sales target and sales price, prediction of cost of production, estimation of operating overheads and fixing-up of profit targets.

6.2 Process of Adopting Profit Decisions in Selected Nationalised Industries

With the discussion of the main concepts and objectives of profit decisions as a frame of reference in the previous section, the process of adopting profit decisions in the nationalised industries need to be analysed here. With the pronouncement of the Nationalised Order, all the industrial enterprises carrying on manufacturing business in Bangladesh had been scheduled under and transferred to several corporations as was pointed out earlier with the aim of conducting business on social as well as commercial consideration which implied the concept of good return on investment and capital employed, and which upheld the basic principle of reporting on profit earning as an index of efficiency of the corporations to the Government. The process of being informed about profit or loss position of the corporations forces them to decide its profit targets through modern management technique of consolidating all the factors which are very much essential for profit decisions and control. In the case of nationalised industries in Bangladesh, the profit decisions and control functions had been carried out at the corporation's higher echelon.

The following Table 6.1 shows the responses of the samples as regards the different authorities which were involved in the process of adopting profit decisions in the selected nationalised industries:

Table - 6.1

Responses of the Samples regarding the Authorities Formulating Profit Decisions

Authorities \ Samples	Corporations	Enterprises	Total
Corporation's Board of Directors	18	22	40 (89)
Concerned Ministry	9	7	16 (35)
Enterprise's Local Management	8	6	14 (31)

(Figures in brackets are percentages of total number of samples).

The above Table shows that respective corporations' Board of Directors, concerned Ministries and individual enterprises' local management were involved in this function. Although the respective corporations played the major role (as opined by 89 percent of the samples), yet the corporations in consultation with their respective enterprises' management (as opined by 31 per cent of the samples) were to formulate profit decisions or fix up the profit targets which were then approved by the Government (as stated by 35 percent of the samples). The respective corporations at their high level managerial meeting decide profit targets, sales targets sales price targets and production targets for the enterprises under their control and lateron each of the enterprises is informed of the targets fixed with the directives for their achievement.[11]

11 Guidelines on the Relationship Between Government and Autonomous Bodies, Corporations and Autonomous Bodies, and Corporations and Enterprises under Them, Cabinet Secretariat, Cabinet Division, May 15, 1976.

6.3 Tools for Profit Decisions and Control

Certain tools were applied for adopting profit decisions in the selected nationalised industries. The following Table 6.2 exhibits the responses of the samples as regards the tools used for the purpose :

Table - 6.2

Responses of the Samples regarding Tools Applied for Profit Decisions and Control

Tools Applied for Profit Decisions and Control / Samples	Corporations	Enterprises	Tool
Operating Budget	14	17	31 (69)
Profit Budget	13	17	30 (67)
Cost-Volume-Profit Analysis	10	17	27 (60)

(Figures in brackets are percentages of total number of samples).

The above Table shows that 69 percent, 67 percent and 60 percent of the samples stated that tools like operating budget, profit budget and cost-volume-profit analysis were used respectively for transacting the process stated earlier. Thus, it is evident that the tools used for profit decisions and control were based on accounting information.

The above mentioned tools applied for profit decisions and control in the selected industries are discussed below. Since our attention is on the operating budgets, it was discussed in detail lateron proceeded by other two tools.

(a) Profit Budget or Proforma Income Statement:

The profit budget is also termed as proforma income statement or projected operating statement or proforma profit and loss account. The term is advantageously used by the nationalised industrial enterprises in their profit decisions and control process. It is based upon the most recent income statement of the firm with appropriate adjustments for expected changes in costs, prices and anticipated demands over the periods covered by the profit budget.[12]

It might be prepared for a financial year or for a half-year classified into monthly time periods. To prepare the statement, necessary data are collected by the financial executive who is to take cooperation from various departments viz., marketing, production, finance, sales, etc. for the purpose. But it had been observed that the nationalised industrial enterprises under study did not follow the usual practice of preparing such statement for their profit decisions and control purpose. Rather the statements prepared by them served in most cases, only the accounting functions.[13]

(b) Cost-Volume-Profit Analysis:

A technique of profit decisions and control that came into use many years of age and had since then gained increasing popularity among accountants, business executives, and some economists is cost-volume-profit analysis. Cost-volume-profit analysis presented in

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12 SPENCER, MILTON H., SEO, K.K. and SIMKIN, MARK G., Management Economics - Text, Problems and Short Cases, Richard D. Irwin, Inc., Homewood, Illinois, USA, 4th Ed., 1975, p.291.

13 Cf., HOQUE, MD. JAHIRUL, "Financial Planning and Control in the Public Sector Industries in Bangladesh", op.cit., p.124.

14 SPENCER, MILTON H., CEO, K.K. and SIMKIN, MARK G., Managerial Economics - Text, Problems and Short Cases, op.cit., p.291.

the form of break-even chart and break-even point, is a formal profit decisions and control approach based on established relationship between costs and revenues.[15] Further, it is the study of profitability and the interactions of changes between fixed costs, selling prices and sales volume on the overall profit.[16] The point at which an enterprise neither makes a profit nor incurs any loss is the break-even point. Cost-volume-profit chart is a graphical representation of fixed costs, variable costs, total sale revenues, break-event point and expected profits.

Accounting information on different items are used while drawing the profit graph or break-even chart. Usually this profit graph or break-even chart is drawn with the use of budgetary information relating to output, sales, costs and expenses, and profits. But most authors[17] were in favour of using the actual accounting information as regards output, sales, costs, and profits side by side with budgetory information on such items so that a comparative analysis of the profit structure can be made. The position of the nationalised industries in Bangladesh in respect to the use of both accounting and budgetory information on sales, output, costs and profit was very deplorable in profit decisions and control function

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15 WING, A GEORGE, A Financial Handbook for Pakistani Executives, Institute of Business Administration, University of Dacca, Dacca, 1970, pp.95-96.

16 CLAY, M.J. and WALLEY, B.H., Performance and Profitability : A Manual of Productivity and Cost Reduction Techniques for Industry and Commerce, op.cit., p.366.

17 SOLOMONS, DAVID, "Break-even Analysis under Absorption Costing", Accounting Review, July 1968, pp. 447-452, and MANES, RENE, "A New Dimension to Break-Even Analysis", Journal of Accounting Research, Spring 1966, pp.87-100.

of the enterprises. The reasons for such state of affairs were stated to be the indifferent attitude of the enterprises' financial executives, absence of any provision in the "Accounts Manuals" in this respect and no clear-cut directives from the corporation.[18] But in this context, in order to judge the effectiveness of the profit decisions and control in the nationalised industries, the picture or position of the average budgeted and actual sales revenues, output, costs and profits of these industrial enterprises could be depicted graphically, but this had not been presented here since it was thought not essential for the purpose of the study.

(x) Operating Budgets:

Our main attention was on operating budgets which covered different aspects of profit decisions and control function of management. Comprehensive profit plan over different items such as sales, output, operating costs and purchases are essential for sound profit decisions. Operating budgets relate to the decisions with regard to the activities or operations of the enterprise such as production, sales and purchases.[19] Further the term 'operating budget' here means a comprehensive profit decisions and control function that is expected to motivate the management at all levels of sales, production and general administration.[20] Operating

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18 Vide the Annual Reports of the Selected Corporations, Viz., BJMC, BTMC, BSFIC, BSFC and BCIC for the years 1975-76 to 1979-80.

19 PANDEY, I.M., Financial Management, op.cit., p.568.

20 BRANDT, LOUIS K., Business Finance : A Management Approach, op.cit., p.108.

budget is composed of two parts - a programme or activity budget and a responsibility budget, representing two different ways of looking at the enterprise operations or activities but arriving at same results. The programme or activity budget specifies the operations or activities to be performed during the next year. The purpose of this budget is to decide for each product the expected revenues and its associated costs. On the other hand, the responsibility budget specifies decisions in terms of individual responsibilities. The basic purpose of this kind of budget is to achieve control by comparing the actual performance of a responsible individual with the expected performance.

It was observed that the nationalised industries in Bangladesh followed budgeting technique as a tool for profit decisions and control. In this regard, 'Annual Revenue Budget' representing the comprehensive profit decisions of the enterprises had been used.

In order to prepare the annual revenue budget, several schedules were used in the selected industries. The following Table 6.3 exhibits the responses of the samples as regards the use of various types of schedules in profit decisions:

Table - 6.3

Responses of the Samples regarding Schedules Used for Profit Decisions

Schedules \ Samples	Corporations	Enterprises	Total
Sales Schedules	20	25	45 (100)
Production Schedules	20	25	45 (100)
Operating Expenses Schedules	20	25	45 (100)
Others: Non-operative Income Schedule, Raw Materials Schedule, Alternative Productive Schedule, etc.	-	7	7 (15)

(Figures in brackets are percentages of total number of samples).

The above Table shows that sales schedule, production schedule and operating expenses schedule were fully used in the enterprises for the same purpose. Some 15 percent of the sample also stated that other schedules like non-operative income schedule, raw materials schedule, alternative production schedule, etc. were used for the purpose. It is thus clear that the schedules used for profit decisions were based on accounting information (excepting schedules belonging to the other category).

6.4 Profit Decisions and Control Areas

Profit decisions and control in the present study, cover four important areas viz., (i) deciding sales target and sale price, (ii) predicting cost of production, (iii) estimating operating expenses or overheads and (iv) determining profit targets which were treated as variables related with this particular financial

decision. The management practice of using accounting information in these four variables had been investigated in the present section side by side with discussion of the schedules as required under operating budgets for the same areas or variables.

6.4.(i) Deciding Sales Targets and Sale Price

(a) Deciding Sales Target:

The sales schedule contains an estimated income of the expected sale proceeds of the various products. The expected sale proceeds or targets are usually affected by the volume of production and ability to sell the products in the market. Then the ability to sell is also influenced by the market conditions such as the customers' demand for the products as well as their purchasing power. However, the sales schedule is the main basis for periodic decision regarding sale proceeds because practically all other related decisions are based mainly on it.[21]

In the selected nationalised industries, sales schedules showing sales targets figures both in quantity and value were prepared and sent to the respective corporations for approval. The sales targets or estimates were usually made for a full year divided on a monthly basis.

Various factors or bases were taken into account while preparing the sales schedules to decide sales targets for the selected industries. The following Table - 6.4 exhibits the responses of the samples as regards consideration of factors or bases in deciding sales targets:

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[21] WELSCH, GLENN A., Budgeting : Profit Planning and Control, op. cit., p. 81.

Table - 6.4

Responses of the Samples regarding the Factors or Bases Considered in Deciding Sales Targets

Factors or Bases Considered in Deciding Sales Targets / Samples	Corporations	Enterprises	Total
Previous Years' Sales Figures	17	20	37 (82)
Present and Future Market Trends (Home and Abroad)	14	20	34 (75)
Expected Cost of Production	14	15	29 (64)
Volume of Production	12	12	24 (53)
Competitive Consideration of Products	8	14	22 (49)
Corporation's Directives	7	11	18 (40)

(Figures in brackets are percentages of total number of samples).

It is evident from the above Table that various factors or bases were considered in deciding sales targets shown in order of importance and among the factors or bases, previous year's sales figures was only treated as accounting while other remaining factors or bases were treated as non-accounting information. It is thus evident that non-accounting information factors or bases were highly used in deciding the sales targets.

Further based on Table 6.4, the responses of the samples as regards the extent of accounting and non-accounting factors or bases considered in deciding sales targets in the selected nationalised industries are shown in the following Table 6.5:

Table - 6.5

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Factors or Bases in Deciding Sales Targets

Factors or Bases in Deciding Sales Targets / Levels of Use	Accounting	Non-accounting	Total	Level of Significance
Corporations	17 (24)	55 (76)	72 (100)	Chi-Square = 0.0818
Enterprises	20 (22)	72 (78)	92 (100)	Not Significant at .05 level
Total :	37 (23)	127 (77)	164 (100)	

(Figures in brackets are column - percentages).

From the above Table it is clear that 77 percent and 23 percent of the samples perceived the factors or bases considered in deciding sales targets as related to non-accounting and accounting information respectively. Of the samples at corporation level, 76 percent and 24 percent viewed the factors or bases as related to non-accounting and accounting information respectively. On the otherhand, of the enterprise heads, 78 percent and 22 percent also viewed the same factors or bases of related to non-accounting and accounting information respectively. Of the samples who viewed the same factors or bases as related to non-accounting information, 57 percent and 43 per cent belonged to the categories of enterprise heads and the samples at corporation level respectively. Then of the samples who viewed the same factors or bases as related to accounting information, 54 per cent and 46 percent belonged to the categories of enterprise heads and corporations samples.

It is thus evident from the opinion of the samples that non-accounting information were widely considered in deciding the sales target both at corporation and enterprise levels. Moreover, there seemed to be no significant relationship between the extent of use of non-accounting information for the same purpose and the level of use (not significant at .05 level). That is, opinion variation as regards the extent of use of accounting and non-accounting information in deciding the sales targets was independent of the variations in the levels of such use (both corporation and enterprise) and thus, resulting in uneconomical sales targets or forecasts ultimately affecting the very financial performances of the industries under study.

However, the effectiveness or otherwise of the decision regarding estimate of income expected from the sale proceeds of the finished products could also be evaluated from the following Table 6.6 showing the original estimates and the revised estimates or sales as well as the actual sales of 245 enterprises under the selected industries for the period under study, 1975-76 to 1979-80.

Table - 6.6

Decision on Original and Revised Budget Estimates of Sales as well as Actual Sales of 245 Enterprises under Selected Industries for the Period Covering 1975-76 to 1979-80

(In Million Taka)

Selected Industries / Years	Jute			Cotton Textile			Sugar and Food			Steel and Engineering			Chemical and Fertilizer		
	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual
1975-76	3060	2857	2937	1774	1834	1820	1620	1600	1312	1576	1160	1177	2156	1571	1050
1976-77	3054	3497	2938	2432	1964	1813	1774	1940	1432	2073	2073	1562	2406	2064	1587
1977-78	3215	3996	4033	2403	2754	2072	1904	1840	2010	2000	2216	1528	2487	2127	1856
1978-79	3893	4395	4505	3391	2859	2498	1933	2594	2136	2617	2713	2054	2311	2587	2271
1979-80	4921	5890	6282	3867	3062	2445	2294	2300	2268	3531	3153	2531	3130	3398	2711
Average :	3629	4127	4139	2773	2495	2130	1905	2055	1832	2359	2263	1770	2498	2349	1895
Increase over Actuals (%)	510(14.05)		12(0.29)	643(23.19)		365(14.62)	73(3.83)		223(10.85)	589(24.91)		493(21.78)	603(24.14)		454(19.33)

[Source: Based on Data presented in Appendices: II(A) to II(E) and IV(A) to IV(E) attached herewith.]

The original and the revised budget estimates of sales and the actual sale proceeds of all the industries showed no specific trend for the period under study. It is observed from the above Table 6.6 that only in Jute Industry actual sales for all the periods had been higher than the original and the revised budget estimates of sales and in all the remaining industries the actual sales had been lower than the original and the revised budget estimates of sales.

The increase in actual sales over the original and the revised budget estimates of sales on the average, was Tk. 510 million (14.05 percent) and Tk. 12 million (0.29 percent) respectively in Jute Industry. On the other hand, the actual sales were lower than the original and the revised budget estimates of sales on the average, by Tk. 643 million (23.19 percent) and Tk. 365 million (14.62 per cent) respectively in Cotton Textile Industry; by Tk. 73 million (3.83 percent) and Tk. 223 million (10.85 percent) respectively in Sugar and Food Industry; by Tk. 589 million (24.97 percent) and Tk. 493 million (21.78 percent) respectively in Steel and Engineering Industry and by Tk. 603 million (24.14 percent) and Tk. 454 million (19.33 percent) in Chemical and Fertilizer Industry.

Jute Industry is an export-oriented industry and foreign sales of jute products constituted 96 percent of its total sales. As such, the sales forecasts might be correct in Jute Industry. But local sales of products other than those of Jute Industry were subject to constant changes and the main reasons for lower sales of the products might be identified as the low use of previous years accounting information in making accurate sales forecast, lower production than targeted production, fluctuations in home consumption, etc.

(b) Deciding Selling Price:

Having determined the sales targets the selling price of products was fixed. Certain authorities were also involved in the process of deciding prices of the products. The following Table - 6.7 exhibits the responses of the samples as regards the various authorities involved in the prices of the products of the selected nationalised industries.

Table - 6.7

Responses of the Samples regarding the Authorities for Taking Price Decision

Authorities for Price Decision \ Samples	Corporations	Enterprises	Total
Concerned Ministries	17	19	36 (80)
Corporation's Board of Directors	14	15	29 (64)
Enterprise's Local Management	11	7	18 (40)

(Figures in brackets are percentages of total number of samples).

The above Table shows that three authorities were involved in this regard. Of them concerned Ministries played the major role in the fixation of prices for the nationalised industries.[22] Price approval was given by the Council of Ministers. Concerned Ministry in consultation with the Board of Directors of the respective corporations used to decide the selling price of the products. There was also a price fixation committee at the corporation level which in

22 ISLAM, NURUL, Development Planning in Bangladesh : A Study in Political Economy, University Press Limited, Dacca, Bangladesh, 1979, p.229.

consultation with the enterprise's local management used to recommend the price to its Board of Directors. Bangladesh Bank was also consulted in some cases for price fixation. But there was some exception in the above process of price fixation in the case of jute products in which case the international market situation played the pivotal role.

Theoretically, the sale price of the products in a nationalised enterprise should be fixed on the basis of marginal cost of production which ensures maximum utilization of the factors of production.[23] But various factors or bases were taken into consideration while deciding the sale price of the finished products of the selected nationalised industries.[24] The following Table 6.8 also exhibits the responses of the samples as regards consideration of various factors or bases in deciding the sale price:

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23 SHUKLA, M.C., Administrative Problems of Public Enterprises in India, S. Chand and Co., Delhi, 1959, p.191.

24 Cf., SOBHAN, REHMAN and AHMED, MUZAFFER, Public Enterprise in and Intermediate Regime : A Study in the Political Economy of Bangladesh, op.cit., pp.476-484.

Table - 6.8

Responses of the Samples regarding Bases or Factors Considered in Deciding Product Prices

Bases or Factors for Product Price Decision / Samples	Corporations	Enterprises	Total
Cost of Production and Cost of Sales	18	19	37 (82)
Market Situation	16	20	36 (80)
Corporations or Ministerial Directives	13	16	29 (64)
Total Cost plus Mark-up*	9	17	26 (58)
Volume of Sales	10	9	19 (42)
Purchasing Power of Customers	10	8	18 (40)
Pricing Tactics*	7	10	17 (38)
Import Price of Raw Materials	4	5	9 (20)
Competitive Price of other Products	3	5	8 (18)
Others: World Demand, Price of Same Products in Other Countries, Price of Synthetic or Substitute Products, Plant Capacity, Inventory Position, etc.	6	6	12 (27)

(Figures in brackets are percentages of total number of samples).

*Notes: 1. For the purpose of determination of selling prices of products, the method of total cost plus mark up is generally followed. After the product-wise costs are calculated, a mark-up percentage ranging from 2½ percent to 10 percent on costs is added for determining the selling price (excluding the sales taxes and excise duties if any).

2. Based on the variable costs plus contribution margin at the rates depending on the particular situation such as export offer for the first time, competitors' prices, etc.

(Source: Office Records of the Selected Corporations).

The above Table shows the factors in order of importance and among the factors considered in price fixation, cost data of products, total cost plus mark-up and cost analysis reports were treated as accounting while market situation, volume of sales, pricing tactics, purchasing power of customers, corporation or Ministerial directives and others like world demand, price of same products in others countries, price of synthetic or substitutes products, etc. were treated as non-accounting factors. It is thus evident that although both accounting and non-accounting factors were taken into account while fixing up the product-price, yet factors related with non-accounting information were significantly used for the purpose.

Based on Table 6.8, the responses of the samples as regards the extent of accounting and non-accounting bases or factors considered in deciding the selling price of products in the nationalised industries are also presented in the following Table 6.9:

Table - 6.9

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Bases or Factors in Deciding Selling Price of Products

Factors Considered in Price Levels Fixation of Use	Accounting	Non-accounting	Total	Level of Significance
Corporation	26 (30)	62 (70)	88 (100)	Chi-Square = 3.426
Enterprises	50 (42)	69 (58)	119 (100)	Significant at .05 level
Total :	76 (37)	131 (63)	207 (100)	

(Figures in brackets are column-percentages).

From the above Table it is evident that 63 percent of the samples viewed the factors considered in price fixation as related to non-accounting information while 37 percent of them viewed the factors as related to accounting information. Of the samples at corporation level, 70 percent and 30 percent viewed the same factors as related to non-accounting and accounting information respectively while on the other hand, of the enterprise heads, 58 percent and 42 percent perceived the factors as related to non-accounting and accounting information respectively. Then, of the samples who viewed the factors as related to non-accounting, 53 percent and 47 percent belonged to the categories of enterprise heads and corporations' samples respectively, while on the other hand, of the samples who viewed the factors as related to accounting, 66 percent and 34 percent belonged to the categories of enterprise heads and corporations' samples respectively.

It is thus clear from the opinion of the respondents that there had been high use of non-accounting information in fixation of product prices both at corporation and enterprise levels. Moreover, there seemed to be significant relationship between the extent of use of non-accounting information for the same purpose and the levels of use (significant at .05 level). That is, the opinion variation as regards the extent of use of accounting and non-accounting information in fixing up the product-prices was not independent of the variation in the levels of such use (both corporation and enterprise) and thus resulting in the defective product prices affecting the very profitability of the selected industries.

The price fixation authorities also maintained certain objectives behind pricing policies in the selected industries. The objectives as stated by the samples are shown in the following Table 6.10:

Table - 6.10

Responses of the Samples regarding Objectives Behind Pricing Policies

Objectives of Pricing Policies \ Samples	Corporations	Enterprises	Total
Reducing Costs	15	14	29 (64)
Increasing Profits or Reducing Losses	12	15	27 (60)
Increasing Sales	11	15	26 (58)
Maximizing Foreign Exchange Earnings	10	13	23 (51)
Offering Customers' Services	14	7	21 (47)
Others: Increasing Share of Bangladesh in the World Market, etc.	3	4	7 (15)

(Figures in brackets are percentages of total number of samples).

The above Table exhibits the objectives in order of importance. Of the identified objectives behind pricing policies, reducing costs, increasing profits and reducing losses were termed as accounting while increasing sales, offering customers' service and earning foreign exchange were treated as non-accounting dimensions. It is thus clear that objectives behind pricing policies were more related with accounting information than with non-accounting information.

Based on the Table 6.10, the responses of the samples as regards the extent of accounting and non-accounting objectives behind pricing policies in the selected industries are shown in the following Table 6.11:

Table - 6.11

Responses of the Samples regarding Extent of Accounting and Non-Accounting Dimensions or Objectives Behind Pricing Policies

Objectives Behind pricing policies / Levels of Use	Accounting	Non-accounting	Total	Level of Significance
Corporations	38 (58)	27 (42)	65 (100)	Chi-Square = 0.550
Enterprises	44 (65)	24 (35)	68 (100)	Not Significant at .05 level
Total:	82 (62)	51 (38)	133 (100)	

(Figures in brackets are column-percentages).

From the above Table it is seen that 62 percent of the samples opined the objectives behind pricing policies as related to accounting information while 38 percent of them opined the same objectives as related to non-accounting information. Of the samples at corporation level, 58 percent and 42 percent viewed the same objectives as related to accounting and non-accounting information respectively while of the enterprises head, 65 per cent and 35 percent viewed the same objectives as related to accounting and non-accounting information respectively. Then on the other hand, of the samples who viewed the objectives as related to accounting information, 54 percent and 46 percent belonged to the categories of enterprise heads and

corporations' samples respectively, while of the samples who viewed the objectives as related to non-accounting information, 53 percent and 47 percent belonged to the categories of corporations' samples and enterprise heads respectively.

It is thus evident from the opinion of the respondents that there had been high use of accounting information in fixing objectives of pricing policies both at corporation and enterprise levels. Moreover, there was no significant relationship between the extent of accounting information in fixing objectives for the same purpose and the level of such use (not significant at .05 level). That is, the opinion variation as regards the extent of use of accounting and non-accounting information in fixing objectives of pricing policies of the selected nationalised industries was independent of the variation in the levels of use (both corporation and enterprise).

It was also observed that certain problems were felt due to fixation of sale price of finished products by the concerned Ministries and the corporations. The following Table 6.12 exhibits the responses of the samples as regards the problems of price fixation by the concerned authorities:

Table - 6.12

Responses of the Samples regarding Problems of Price Fixation by the Concerned Authorities

Problems of Price Fixation \ Samples	Corporations	Enterprises	Total
Price of Alternative or Substitute Products Not Fully Considered	8	10	18 (40)
Cost of Production Not Fully Covered	9	7	16 (35)
Actual Financial Profitability of the Enterprises Overlooked	7	8	15 (33)
Social Consideration Taken into Account Fully	7	7	14 (31)
Frequent Price Fluctuations at Home and Abroad Not Fully Considered	4	7	11 (24)
Competitive Consideration of Products Not Given Effect to	6	4	10 (22)
Lack of Knowledge about Real Situation	-	6	6 (13)
Commercial Consideration Ignored	-	5	5 (11)
Others: Delay in Fixation, Unstable Economy of the Country, Duty and Tax Anomalies, Neglect of Customer's Services, Uncertainty of Demand and Supply, etc.	-	4	4 (9)

(Figures in brackets are percentages of total number of samples).

The above Table shows the problems as identified by the samples in order of importance. Among the problems, non-consideration of cost of production and financial profitability of the enterprises were treated as accounting while competitiveness, alternative or substitute products' price, frequent changes in prices, social consideration and inddequate or lack of knowledge about real situation were considered

as being related to non-accounting dimensions. It is thus evident that problems mentioned above were related with both accounting and non-accounting dimensions of which non-accounting dimensions got prominence over the accounting ones.

6.4(ii) Deciding Cost of Production

The production schedule represents an estimated quantum of goods to be manufactured during a particular period usually, a budgeted period. The criteria considered in preparing the production schedule are estimated sales and expected investment in raw materials, work-in-process and finished inventories for the budgeted period. In this connection, another schedule named as cost of production schedule also shows an estimate of the cost of production embracing all prime costs plus factory overhead expenses of the estimated quantum or volume of goods that would be manufactured in the budgeted period. The production schedule is an important tool for decision-making, coordination and control.[25] It establishes the basis for deciding the volume of manufactured goods. As such, the production schedule is treated as guide lines for production, inventories, production costs and manpower in the factory.[26]

In selected nationalised industries of Bangladesh, production schedule and cost of production schedule showing the estimated quantum of goods to be manufactured and the cost of manufacturing the

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25 MOOR, FRANKLIN and JABLUSKI, RONALD, Production Control. Macgraw-Hill Book Co., Inc., New York 1969, p.18.

26 BUFFA, E.S., Production Inventory System : Planning and Control, Richard D. Irwin NInc., Homewood, Illionois, 1968, p.63.

products respectively were prepared and sent to the respective corporation monthly. Estimates for full one year divided on a monthly basis were shown in the schedules.

Various factors or bases were into consideration while deciding cost of production in the enterprises under selected industries. The following Table 6.13 exhibits the responses of the samples as regards the factors or bases considered in deciding cost of productions

Table - 6.13

Responses of the Samples regarding Factors or Bases Considered in Deciding Cost of Production

Samples / Factors or Bases Considered in Deciding Cost of Production	Corporations	Enterprises	Total
Past Records Relating to Cost of Goods Products	15	22	37 (82)
Past Volume of Production	11	18	29 (64)
Market Trends (Present and Future) Relating to Cost-Elements	10	15	25 (55)
Import Price of Raw Materials	8	14	22 (49)
Price of Synthetic or Substitute Products	7	12	19 (42)
Rates of Duties and Taxes	2	10	12 (27)

(Figures in brackets are percentages of total number of samples)

The above Table shows the various factors or bases considered in deciding cost of production in order of preference. Of the factors or bases considered for deciding the cost of production, past records relating to cost of products manufactured, import price of raw materials and price of synthetic or substitute products were

treated as accounting while past volume of production, market trends relating to cost-elements and rates of duties and taxes were treated as non-accounting information. It is thus evident that both accounting and non-accounting information were used in deciding the cost of production, of them accounting information were highly used for the purpose.

Based on Table 6.13, the responses of the samples as regards the extent of accounting and non-accounting factors or bases considered in deciding cost of production in the selected nationalised industries are shown in the following Table 6.14:

Table - 6.14

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Factors or Bases Considered in Deciding Cost of Production

Factors or Bases in Deciding Cost of Production / Levels of Use	Accounting	Non-accounting	Total	Level of Significance
Corporations	30 (57)	23 (43)	53 (100)	Chi-Square = 0.200
Enterprises	48 (53)	43 (47)	91 (100)	Not Significant at .05 level
Total :	78 (54)	66 (46)	144 (100)	

(Figures in brackets are column-percentages).

From the above Table it is clear that 54 percent of the samples viewed the factors or bases considered while deciding cost of production as related to accounting information while 46 percent of them viewed the same factors or bases as related to non-accounting information. Of the samples at corporation level, 57 percent and 43 per

cent perceived the same factors as related to accounting and non-accounting and information respectively while of the enterprise heads, 53 percent and 47 percent perceived the same factors as related to accounting and non-accounting information respectively.

Then of the samples who viewed the same factors or bases as related to accounting, 62 percent and 38 percent belonged to the categories of enterprise heads and corporation's samples respectively. On the other hand, of the samples who viewed the same factors as related to non-accounting, 65 percent and 35 percent belonged to the categories of enterprise heads and corporations' samples respectively.

It is thus evident from the opinion of the samples that there had been high use of accounting information in deciding the cost of production both at corporation and enterprise levels. Moreover, there seemed to be no significant relationship between the extent of use of accounting information and the levels of use (not significant at .05 level). That is, opinion variation as regards the extent of use of accounting and non-accounting information in deciding the cost of production was independent of the variation in the levels of use (both corporation and enterprise) and thus resulting in high cost of production ultimately affecting the profitability of the industries under review.

In order to evaluate the effectiveness or otherwise of the cost of production schedule, the Table 6.15 showing the budgeted (both original and revised) and the actual cost of production had been presented below:

Table - 6.15

Decision on Original and Revised Budget Estimates of Cost of Production as well as Positi
Cost Production of 245 Enterprises under Selected Industries for the Period,
1975-76 to 1979-80

Selected Industries / Years	Jute			Cotton Textile			Suger and Food			Steel and Engi	
	Origi-nal	Revi-sed	Actual	Origi-nal	Revi-sed	Actual	Origi-nal	Revi-sed	Actual	Origi-nal	Revi-sed
1975-76	2187	2420	2662	1204	1297	1332	778	900	980	726	820
1976-77	2316	2630	2858	1268	1402	1542	884	943	1034	1010	1200
1977-78	3411	3993	4297	1440	1609	1729	1370	1510	1600	954	1100
1978-79	5524	4518	5675	3102	2816	2289	1843	2555	1725	2509	2599
1979-80	5252	5298	5560	3812	3256	2458	2179	2279	1695	3362	3022
Average :	3738	3772	4210	2165	2076	1870	1411	1637	1407	1712	1748
Increase over Actuals (%)	472(12.62)		438(11.61)	-295(13.62)		-206(9.92)	4(0.28)		230(14.05)	180(10.51)	208

[Source: Based on data presented in Appendices II(A) to II(E) and IV(A) to IV(E) attached herewith.]

It is observed from the Table 6.15 that the actual cost of production was high over the original and the revised budget estimates of cost of production for all the periods in the Jute Industry. On the other hand, there was increase of the actual cost of production over the original and the revised budget estimates or production cost in the case of all the remaining industries for first three years of the study period (1975-76 to 1977-78) and that the actual cost was lower than the original and the revised budget estimates of production cost in the remaining industries for the last two years of the study period (1978-79 to 1979-80).

The increase in the actual cost of production over the original and the revised budget estimates of production cost in the Jute Industry on an average, was Tk. 472 million (12.62 percent) and Tk. 438 million (11.61percent) respectively. On the other hand, the actual cost of production was lower than the original and the revised budget estimates of cost of production in the case of other industries on an average by Tk. 295 million (13.62 percent) and Tk. 206 million (9.92 percent) respectively in Cotton Textile Industry; by Tk. 04 million (0.24 percent) and Tk. 230 million (14.05 percent) respectively in Sugar and Food Industry; by Tk. 180 million (10.51 percent) and Tk. 208 million (11.90 percent) respectively in Steel and Engineering Industry and Tk. 222 million (13.72 percent) and Tk. 459 million (20.74 percent) respectively in Chemical and Fertilizer Industry.

The above state of affairs indicates that production schedule and cost of production schedule were not sound enough in the selected nationalised industries, the main reasons among others, might be escalation of raw materials and wages, higher expenses incurred for repairs and maintenance, high depreciation amount, shortage of

spareparts, higher rates of industrial power, etc. resulting in low production and high cost of production as compared to targets set in the schedules.

6.4(iii) Estimating Operating Expenses

The operating expenses schedule is an estimate for future expenses which comprise office and administration expenses schedule and selling and distribution expenses schedule. Office and administration expenses include those expenses which are incurred in conducting a business, excepting works expenses and sales and distribution expenses. Whereas, selling and distribution expenses include those expenses which are incurred for sales, distribution and delivery to the products. Such estimate of future operating expenses are especially significant for managerial decision-making and control purposes.[27]

In the nationalised enterprises under study, office and administration expenses schedules and selling and distribution expenses echedules containing estimates of the respective expenses for the budgeted period were prepared and sent to the respective corporations monthly for approval purpose. Various factors or bases were considered while preparing estimates for operating expenses or overheads in the enterprises under selected industries. The following Table 6.16 exhibits the responses of the samples as regards the factors or bases which were taken into consideration while preparing operating expenses schedules.

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[27] WELSCH, GLENN A., Budgeting : Profit Planning and Control, op.cit., p. 162.

Table - 6.16

Responses of the Samples regarding Factors or Bases Considered in Estimating Operating Expenses

Factors or Bases for Estimating Operating Expenses \ Samples	Corporations	Enterprises	Total
Past Accounting Data Relating to Operating Overheads	12	19	31 (69)
Pay-hike of the staff	10	15	25 (55)
Increased Amount of Interest	8	14	22 (49)
Present and Future Market Trends (relating to the said expenses)	7	10	17 (38)
Sales Agents' or Distributors' Commission	4	9	13 (29)

(Figures in brackets are percentages of total number of samples).

The above Table shows the various factors or bases considered for estimating or deciding the operating expenses in order to importance. Of the factors or bases stated above, past accounting data relating to operating overheads, pay-hike of the staff and increased amount of interest were treated as accounting while present and future market trends relating to the same expenses and sales agents' or distributors' commission was treated as non-accounting information.

Thus, it is evident that although, both accounting and non-accounting information were used in estimating or deciding the operating overheads, accounting information outweighed the non-accounting information.

Based on Table 6.16, the responses of the samples as regards the extent of accounting and non-accounting factors or bases taken into account in estimating operating expenses in the selected industries are exhibited in the following Table 6.17:

Table - 6.17

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Factors or Bases Considered in Estimating Operating Expenses

Factors or Bases in Estimating Operating Expenses / Levels of Use	Accounting	Non-accounting	Total	Level of Significance
Corporations	30 (73)	11 (27)	41 (100)	Chi-Square = 0.0297
Enterprises	48 (72)	19 (28)	67 (100)	Not Significant at .05 level.
Total :	78 (72)	30 (28)	108 (100)	

(Figures in brackets are column-percentages).

It is evident from the above Table that 72 percent of the samples perceived the bases considered in estimating operating expenses as related to accounting information while 28 percent of them perceived the same bases as related to non-accounting information. Then, of the samples at corporation level, 73 percent and 27 percent viewed the same bases as related to accounting and non-accounting information respectively while of the enterprise heads, 72 percent and 28 percent also viewed the same bases as related to accounting and non-accounting information respectively.

On the other hand, of the samples who viewed the same bases as related to accounting information, 62 percent and 38 percent belonged to the categories of enterprise heads and corporations' samples, while of the samples who viewed the same or bases as related to non-accounting information, 63 percent and 37 percent also belonged to the enterprise heads and corporations' samples respectively.

Thus it is evident from the opinion of the samples that accounting information was widely used in deciding or estimating overhead expenses both at corporation and enterprise levels. Moreover, there seemed to be no significant relationship between the extent of the accounting information and the levels of the use (not significant at .05 level). That is, opinion variation as regards the extent of use of accounting and non-accounting information in estimating operating expenses was independent of the variations in the levels of use (both corporation and enterprise) and thus resulting in higher operating overheads ultimately affecting the financial performances of the identified industries.

To evaluate the effectiveness or otherwise of the office and administration expenses schedule, and the selling and distribution expenses schedule, the following Table 6.18 showing the budgeted (both original and revised) and the actual operating expenses for 245 enterprises under the selected industries for the period, 1975-76 to 1979-80 had been presented:

Table - 6.18

Decision on Original and Revised Estimates of Operating Overheads as well as Position of Actual Operating Overhead or Expenses of 245 Enterprises under Selected Industries for the period, 1975-76 to 1979-80

(In Million Taka)

Selected Industries / Years	Jute			Cotton Textile			Sugar and Food			Steel and Engineering			Chemical and Fetilizer		
	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual	Original	Revised	Actual
1975-76	350	358	361	270	276	277	251	260	267	171	179	183	171	183	198
1976-77	380	393	398	303	349	354	261	271	277	199	203	208	181	196	202
1977-78	409	425	429	341	359	363	280	285	289	219	227	228	217	241	248
1978-79	445	465	477	376	415	424	305	315	321	240	249	255	247	267	282
1979-80	480	495	500	400	435	444	328	335	340	259	270	278	280	302	315
Averages	413	427	433	338	367	372	285	293	299	218	226	230	219	238	247
Increase over Actuals (%)	20(4.84)	6(1.40)		34(10.05)	5(1.36)		14(4.91)	6(2.05)		12(5.50)	4(1.76)		28(12.78)	9(3.64)	

[Source: Data Based on Annual Reports and Budget Statements for the Period, 1974-75 to 1980-81 of the Enterprises under the Selected Industries.]

It is evident from the said Table 6.18 that the actual operating overheads were higher than the original and the revised budget estimates of such expenses in all the selected industries for all the periods under study. The increase of actual overheads over the original and the revised budget estimates of overhead expenses was 4.84 per cent and 1.40 percent respectively in Jute Industry; 10.50 percent and 1.36 percent respectively in Cotton Textile Industry; 4.91 percent and 2.05 percent respectively in Sugar and Food Industry; 5.50 percent and 1.76 percent respectively in Steel and Engineering Industry and 12.78 percent and 3.64 percent respectively in Chemical and Fertilizer Industry.

The above state of affairs indicates that estimated operating expenses schedule in the industries under study, was not an effective one since the actual operating expenses were higher than the original and the revised budget estimates of such expenses althrough the study period in all the selected industries mainly due to reasons like, increase of bank interest rates, implementation of new national pay scale of the staff, and various higher tax rates, of them some were controllable and others were uncontrollable both at the corporation and the enterprises level.

6.4(iv) Deciding Profit Targets

In order to take decisions on operating profit for the budgeted period, revenue budget needs to be prepared. The revenue budget is an estimate of expected future income, costs, expenses and net profits (before (tax), workers' provident fund, income tax provisions, contribution to Government exchequer, etc. In the selected nationalised industrial enterprises, revenue budget showing the expected

profit(before interest and taxes) for the budget period was prepared and sent to the corporation. The budget estimates for profits was made for a full one financial year but then divided monthwise. Such budget alongwith other operating expenses schedules would be revised every 6 months on the basis of the last 6 months' accounting information related to actual operations of the enterprises.

Various factors or bases were taken into account while deciding profit targets for the enterprises by the authorities mentioned earlier. The following Table 6.19 exhibits the responses of the samples as regards the various factors or bases considered in deciding the profit targets for the enterprises under the selected industries:

Table - 6.19

Responses of the Samples regarding Factors or Bases Considered in Deciding Profit Targets

Samples / Factors or Bases Considered in Profit Targets	Corporations	Enterprises	Total
Cost of Production	19	20	39 (37)
Previous Years' Profit Figures	11	18	29 (64)
Volume of Sales	14	14	28 (62)
Capital Investment	7	6	13 (29)
Volume of Production	3	8	11 (24)
Others: Social Consideration, Capacity Utilization, Respective Share of Overall Profit Targets of the Corporation, etc.	2	6	8 (18)

(Figures in brackets are percentages of total number of samples).

The above Table shows the factors in order of importance and among the factors considered in deciding the profit targets, cost of production, previous years' profit figures and capital investment were treated as accounting information while volume of sales and volume of production were termed as non-accounting information.

Based on Table 6.19, the responses of the samples as regards the accounting and non-accounting bases in deciding profit targets in the selected nationalised industries are shown in the following Table 6.20:

Table - 6.20

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Factors or Bases Deciding Profit Targets

Factors or Bases in Deciding Profit Targets / Levels of Use	Accounting	Non-accounting	Total	Level of Significance
Corporations	37 (57)	19 (43)	56 (100)	Chi-Square = 0.332
Enterprises	44 (61)	28 (39)	72 (100)	Not Significant at .05 level
Total :	81 (63)	47 (37)	128 (100)	

(Figures in brackets are column-percentages).

From the above Table it is clear that 63 percent of the samples perceived the factors considered in deciding profit targets as related to accounting information while 37 percent of them perceived the same factors as related to non-accounting information. Of the samples at corporation level, 57 percent and 43 percent perceived the factors

as related to accounting and non-accounting information respectively. On the other hand, of the enterprise heads, 61 percent and 39 percent perceived the factors as related to accounting and non-accounting information respectively. Then, of the samples who viewed the factors as related to accounting aspects, 54 percent and 46 percent belonged to the categories of enterprise heads and corporations' samples respectively. On the other hand, of the samples also viewed the factors as related to non-accounting, 60 percent and 40 per cent belonged to the categories of enterprise heads and the corporations' samples respectively.

It is thus evident from the opinion of the samples that accounting informations were widely considered in deciding the profit targets both at corporation and enterprise levels. Moreover, there seemed to be no significant relationship between the extent of use of accounting information for the same purpose and the level of use (not significant at .05 level). That is, the opinion variation as regards the extent of use of accounting and non-accounting information in deciding the profit targets was independent of the variations in the levels of such use (both corporation and enterprise) and thus, resulting in defective profit targets ultimately affecting the very profitability of the industries under study.

Besides various factors or bases considered in deciding profit targets as mentioned in Table 6.19, certain objectives were also kept in mind while determining profit targets. The following Table 6.21 exhibits the responses of the samples as regards the various objectives behind the fixing of profit targets in the selected industries:

Table - 6.21

Responses of the Samples regarding Objectives Behind Profit Targets

Objectives of Profit Targets \ Samples	Corporations	Enterprises	Total
Increasing Earnings or Sales	17	20	37 (82)
Reducing Costs	18	18	36 (80)
Minimizing Capital Investment or Capital Expenditure	13	11	24 (53)
Preserving Integrity of Capital Investment or Capital Expenditure	5	5	10 (22)
Others: Maximum Use of Public Property, Provision of Goods and Services at Minimum Cost for Serving Social Obligation, etc.	2	5	7 (15)

(Figures in brackets are percentages of total of samples).

The above Table shows the objectives behind fixing up profit targets in order of importance. Among the objectives behind fixing up profit targets, increasing earnings or sales, reducing costs and minimizing capital investment or capital expenditure were treated as accounting objectives while preserving integrity of capital investment or capital expenditure and providing goods and services at minimum cost were termed as non-accounting objectives. Thus accounting dimensions got prominence over the non-accounting dimensions. But this process of fixing the profit targets carried with it. Some drawbacks which were identified in the following Table 6.22:

Table - 6.22

Responses of the Samples regarding the Drawbacks in Fixing up Profit Targets by the Concerned Authorities

Drawbacks in Fixing up Profit Targets / Samples	Corporations	Enterprises	Total
High Cost of Production not Fully Considered	10	10	20 (44)
Capacity Utilization not Considered	6	12	18 (40)
Financial Profitability of Respective Enterprises not Considered	7	9	16 (35)
Frequent Price Fluctuations of Imported Raw Materials not Considered	6	6	12 (27)
Uncertainties of Market Price of Local Products not Considered	5	6	11 (24)
Fluctuations in World Market Demand not Considered	4	5	9 (20)
Unfavourable Financial Liquidity not Considered	4	2	6 (13)
Others: Uncertainties in Implementation, Lack of Enthusiasm, Lack of Knowledge, High Scocial Consideration, Unrealistic or Irrational Expectation, Import of Identical Products at Marginal Cost, etc.	2	3	5 (11)

(Figures in brackets are percentages of total number of samples)

The above Table shows the various drawbacks as identified by the samples in order of importance. Among the many-fold drawbacks in fixing up profit targets by the concerned authorities, non-consideration of cost of production and financial profitability, and unfavourable financial liquidity, were treated as accounting drawbacks while non-consideration of capacity utilization, frequent fluctuation of price and non-consideration of market price of local products, etc.

were treated as non-accounting drawbacks. Thus, it is evident that the major drawbacks in fixing profit targets were related more or less with low use of both accounting and non-accounting information.

The following Table 6.23 showing budgeted, actual and required amount of net profits had been presented in order to evaluate the effectiveness or otherwise of profit decisions and control of the industrial enterprises under selected industries:

Table - 6.21

Comparison between Original Budget Estimate (OBE) of Net Profit, Revised Budget Estimate (RBE) of Net Profit, Actual Net Profit (ANP) and Required Net Profit (RNP) in the Selected Nationalised Industries Covering 245 Enterprises for the Period, 1975-76 to 1979-80

(In Million Taka)

Selected Industries / Years	Jute				Textile				Sugar and Food				Steel and Engineering				Chemical and Fertilizer			
	OBE	RBE	ANP	RNP	OBE	RBE	ANP	RNP	OBE	RBE	ANP	RNP	OBE	RBE	ANP	RNP	OBE	RBE	ANP	RNP
1975-76	(277)	(264)	(298)	214	172	172	19	60	(37)	(55)	12	50	89	89	70	72	(36)	(171)	(101)	190
1976-77	(300)	(447)	(1624)	209	60	(142)	(138)	62	53	77	75	50	81	81	86	73	62	90	184	244
1977-78	(1111)	(1631)	(953)	226	(204)	143	83	84	162	81	55	55	67	120	76	75	367	116	(02)	255
1978-79	(1631)	(522)	(608)	237	289	43	47	119	90	39	63	66	104	114	102	48	228	142	52	291
1979-80	(331)	592	1167	251	55	(195)	(187)	114	115	120	212	68	168	130	147	48	205	51	(82)	294
Average :	(730)	(454)	(463)	227	74	04	68	88	77	52	83	58	102	107	96	63	165	46	10	254
Increase/Decrease - Over Net Profit (%)	-	-	-	-	6(8.11)		20(22.72)		6(7.79)		31(59.61)		6(5.88)		11(10.28)		155(93.94)		36(78.26)	

Source: Budget Estimates of Nationalised Industries (Autonomous Bodies) for the period under review.

Notes : OBE - Original Budget Estimate of Profit, RBE - Revised Budget Estimate of Profit, ANP - Actual Net Profit and RNP - Required Net Profit.

It is evident from the said Table 6.23 that the actual profit earned was lower than the original budget and the revised estimates of profit requirements in Cotton Textile, Steel and Engineering and Chemical and Fertilizer Industries for the period under study and that it was higher in Sugar and Food Industry. The Jute Industry incurred loss on an average for the study period at an amount of Tk. 463 million. The actual profit was lower than the original budget on an average, by 8.11 percent in Cotton Textile Industry. Then the actual profit was also lower than the original and the revised budget estimate profit by 5.88 percent and 10.28 percent respectively in Steel and Engineering and by 93.94 percent and 78.26 percent respectively in Chemical and Fertilizer Industry while the actual profit was higher than the original and the revised budget estimate by 7.79 percent and 59.61 percent respectively in Sugar and Food Industry.

It is also observed from the said Table that the actual profit was lower than the required amount of profit by 22.72 per cent in Cotton Textile Industry and 96.06 percent in Chemical and Fertilizer Industry and while the actual profit was higher than the required amount of profit by 43.10 percent in Sugar and Food Industry and 52.38 percent in Steel and Engineering Industry for the period under study. Such state of affairs indicates that the forecast of expected income, costs, expenses and net profit i.e. profit decisions and control were not appropriate and effective in most of the selected industries for the period under study.

Practice of inappropriate sales forecasts, inadequate production, price escalation, shortage of raw materials, scarcity of spareparts, increased wages, higher expenses for repairs and maintenance, higher rates of industrial power, big amount of depreciation, huge amount of interest on bank loan, high rates of taxes, implementation of increased pay scale of the staff, poor budgeting practices, etc. were the various factors which accounted for the ineffective sales, inappropriate sale price, high cost of production, high operating overheads and unattainable profit targets as revealed earlier. This state of affairs resulted in great variation between the actuals and the budgeted (both original and revised) figures on sales, production cost, operating overhead and profit. Proper budgets based on historical accounting information were not prepared and used both at the corporation and enterprise levels. The acceptance and use of budget was low at the nationalised industrial enterprises.[28] The budgeting system practised by the corporations seemed to have not taken note of needs, goals and attitudes treated as behavioural issues of the management.[29] There was also no proper practice of introducing and following responsibility budgeting in order to fix up the responsibility and accountability for deviations by identifying the controllable and uncontrollable factors at various stages of production and levels of management. Cash budget which is an effective means to achieve the end of

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28 HYE, MD. ABDUL, "Acceptance and Use of Budget by Managers of Nationalised Industrial Enterprises in Bangladesh", op. cit., p.3.

29 KHALID, A.B.M., Accounting Problems of Nationalised Industries. University Grants Commission, Dacca, (Unpublished), 1979, p.97.

sound financial decisions i.e. the liquidity and the profitability of the enterprise was not prepared in a systematic and regular manner.[30] The various schedules discussed above were not properly integrated by examining the previous accounting figures and the revenue budget could not play the role of performance budget. However, the extent of use of accounting information in profit decision and control areas and the impact thereof on the financial performances, that is, profitability of the selected industries however, had been shown in Chapter 8.

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30 BHATTACHARIYA, D.P., "Cash Budget - An Effective Means to Solve Liquidity Problems", The Cost and Management, Institute of Cost and Management Accountants of Bangladesh, Volume XI, No. 5, September-October, 1983, pp. 35-39.

CHAPTER - 7

MANAGEMENT INFORMATION AND FINANCIAL REPORTING SYSTEM

In the earlier chapters, a brief review of industrial development followed by management pattern and accounting system of the nationalised industries had been dealt with and finally, the three specific financial decisions and control areas with the extent of use of accounting information in each area had been presented. Before going into detailed analysis of the impacts of use of accounting information in the same specific financial decisions and control areas on the profitability, it becomes imperative to examine the existing management information and financial reporting system in the context of its usefulness or otherwise to help use by management of accounting information in the same financial decisions and control areas. This chapter deals with the following aspects of management information and financial reporting system as prevalent in the case of the nationalised industries in Bangladesh: (i) Concept of Financial Reporting and Management Information System (MIS), (ii) MIS in operation; (iii) Operating Functions of MIS, (iv) Structure of Financial and MIS Reports and Internal and External Users thereof and (v) Deficiencies and Shortcomings of Management Information and Financial Reporting System for Management use of Accounting Information in Financial Decisions and Control.

7.1 Concept of Financial Reporting and Management Information System

One of the important responsibilities of the financial executives of any industrial and commercial organisations is to prepare

and make available to various internal and external users all accounting data and information which help the management decisions in fulfilment of the organizations' objectives. Admittedly, the nature of data and information that might be required by management and other users is largely determined by the way the data are to be used, because certain users especially management might require accounting information for decision-making and control purposes and other users like creditors, lenders, Government, etc. may require accounting information for different purposes.

Basically, communication which refers to the process of informing the employees about all sorts of activities of the organisation in the form of data and information, tries to inform them of the intentions of the management and serves as a feedback to management regarding the result of their decisions.[1] Financial reporting system acts as an important means of communication of information. In case of all types of enterprises, accounting information and their proper reporting aid as the vital tool for decisions and control purposes. Proper financial reports and statements need to be prepared portraying the real picture of the enterprise and be communicated to the various internal and external users. Communicating the results of the business to the interested parties by means of financial reports, portraying the financial aspects of the activities of the enterprise over a certain period tentamounts to financial reporting system.[2]

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[1] MOHSIN, M., Financial Planning and Control, op. cit., p.186.

[2] GUPTA, N. DAS, Financial Reporting in India, Sultan Chand and Sons, New Delhi, 1977, p.3.

On the other hand, "Management Information System" which is termed by some writers as "Information Processing Systems", are designed to support the operations and decisional functions of an organization.[3] Pieces of information are data which are evaluated for a specific purpose. The accounts department collects data and evaluates them for specific purposes and they become information. The flow of information is made regular by means of an information system. A management information system aids management in getting this job done. In simple sense, information for decision-making is management information system. A management information systen can be defined as an organised method of providing each manager with all information and only with that information which he needs for his decisions and in a form which aids his understanding and stimulates his action.[4] A management information system may also be defined as the set of human and capital resources within an organization which is responsible for collection and processing of data to produce information which aids management in decision-making and controlling the activities of the organization.[5] Further, management information system has been described by Robert V. Head as a pyramid structure shown below (Fig. I) in which the bottom layer consists of the information for transaction processing, status inquiries,etc., the next level consists of information resources in support of the day-to-day operations of management, the third level consists of infor-

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[3] DAVIS, GORDON B., Management Information System : Conceptual Foundations, Structure and Development, McGraw-Hill, International Book Company, 1974, p.3.

[4] RAO, K. VENKATA, Introduction to Quantitative Techniques and Data Processing, S. Chand & Co. Ltd., New Delhi, 1st Ed., 1975, p.246.

[5] KANTER, JEROME, Management-Oriented Management Information System, Prentice-Hall of India Private Ltd., New Delhi, 1978, p. 1-2.

mation resources to aid in tactical planning and decision-making for management and the top level consists of information resources in support of the planning and policy making by higher levels of management.[6] Thus, the goal of management information system is to support the operations of the enterprise and finally contribute to the equality of management decision-making and control function.[7]

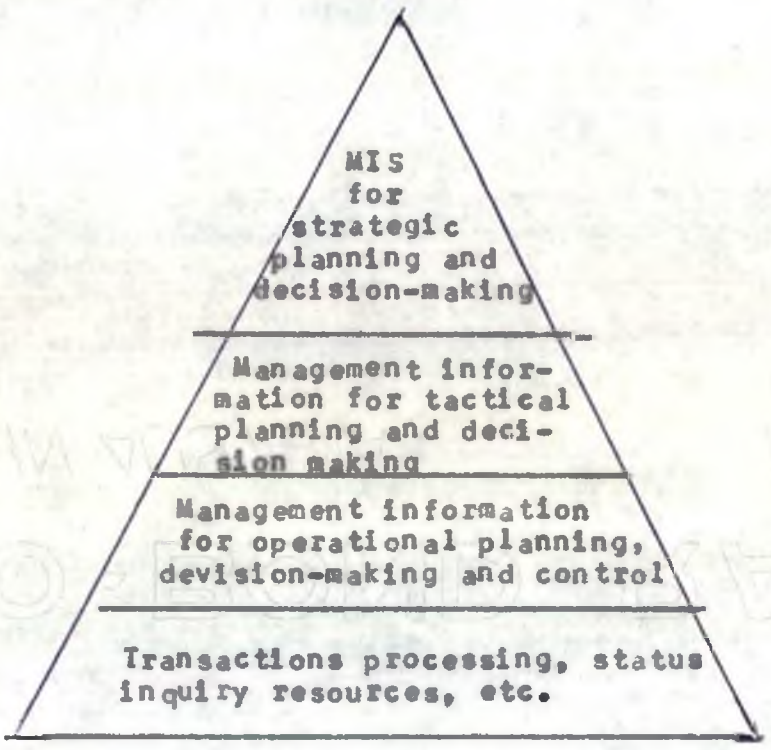

Fig. I: Pyramid Structure of Management Information System.

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6 HEAD, ROBERT V., "Management Information System : A Critical Appraisal", Datamation. May, 1967, p.23.

7 DE MAAGD, GERALD R. (Ed.), "Management Information System, Management Accounting. Vol. LXV, No. 7, January, 1984.

From the above definitions, it can be said that management information and financial reporting system is an integrated system which provides management with data and information in the form of reports to support the operations of the organization and to aid management in its decision-making and control function. For the purpose the system need be organized in such a way as to provide the necessary intelligence on a timely basis to help management decide, execute and control.[8] In this connection the key to developing a dynamic and usable management information and financial reporting system is to conceive of the management process namely, decision and control,[9] requiring various types of information and data namely, financial and non-financial, environmental, competitive and operating for decision-making, control and feedback purposes.

7.2 Management Information System in Operation in Selected Nationalised Industries

The industrial enterprises placed under the selected sector corporations consisted of diversified nature with diversified products and each of the industrial enterprises was beset with multiple problems. There was no provision for information flow from the industry shops or centres to the industry management (local management) and upward to the corporation management or among various departments. Lack of information flow caused much delay in decision making process at the enterprise and corporation levels. This

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8 DEAN, JOEL, Capital Budgeting, Columbia University Press, New York, 1951, p. 202.

9 WILSON, R.M.S., Financial Control : A System Approach, op.cit., pp. 30-31.

resulted in operational inefficiency hampering the un-interrupted flow of information relating to capacity utilization, marketing, sales, inventory control, cost of production, working capital, capital expenditures, etc. A management information system division was set up in each corporation's head office so as to ensure optimum capacity utilization and increase productivity thus maximizing return for growth of industries.[10]

The preliminary work for introduction of management information system was started in 1972 and completed in corporations like BSFIC, BCIC and BSEC in 1973-74 by the P.A. Management Consultants Ltd. Whereas in BJMC, World Bank Team in 1977 after studying the existing reporting system advised to set up a MIS immediately. A local firm of management consultants which was appointed to design and implement MIS for BJMC and its enterprises, submitted their reports in 1979 and a skeleton MIS headed by a General Manager was introduced. The main objective of introducing the management information system was to set up an effective, uniform and sophisticated information system at enterprises, so that corporations and Government can evaluate the performances and achievements of the enterprises, identify their shortcomings and problems and facilitate right decisions by the right persons at the right time.

The system that was involved in the different levels of communication and financial reporting such as collection and recording of data and information, preparing proper reports, statements and returns, and lastly, disseminating these reports, etc. to the

10 Cf. Manuals of Integrated Accounting System of the Selected Sector Corporations.

various internal and external users was known as management information system in nationalised industrial enterprises in Bangladesh. The management information system division at corporation level had to devise systems according to nature, products, investments, etc., of the enterprises concerned. However, the system introduced in the industries had the following common elements of information flow:

(a) Input and output data from production shops;

(b) Sales data from Marketing Division;

(c) Raw materials as well as important spares stock positions identifying critical areas;

(d) Manpower utilization and idle hours from production shops and service centres;

(e) Liquidity position, profit and loss position, statements of assets and liabilities, budget usage statement, salaries and wages contribution to national exchequer from accounts and

(f) Manpower strength against organogram, law and order situation from administration, etc.[11]

Further, the system that was introduced consisted one separate department or division and three sections at the corporation level. The Management Information System Division or Department was ultimately placed under the control and supervision of the Finance Director and the Head or Chief of the Management Information System was designated as General Manager. He was to directly report to the Head of the Accounts Division who in turn would report to the Finance Director, the top most financial

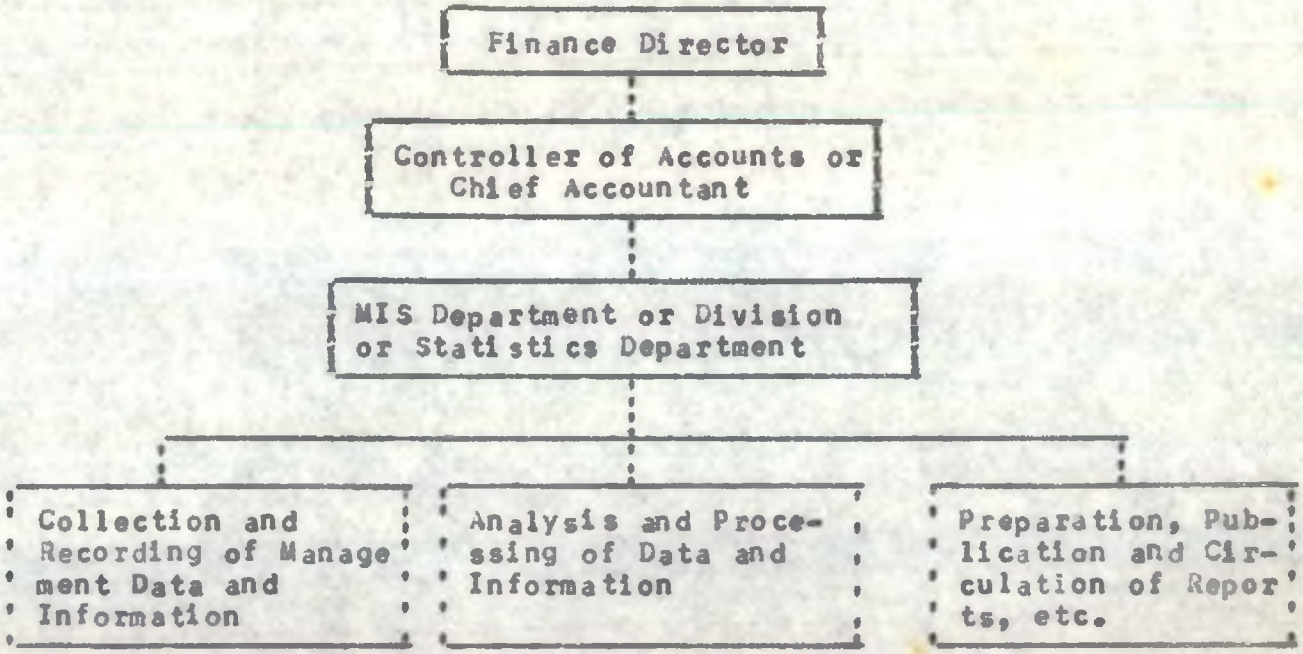
[11] Cf., Organization Manuals of BJMC, BTMC, BSFIC, BSEC and BCIC.

executive in the Corporation. There had been three common sections in Management Information System Department/Division in the case of each of the Corporations and these are known as "Collection and Recording of Management Data and Information", "Analysing and Processing of Data and Information" and "Preparation, Publication and Circulation of Reports".

The management information system at the enterprise level considered of a sub-section named as "Annual Reports and Financial Statements" under "General Accounts" Section. This sub-section had been placed under the ultimate control and supervision of the Chief or Deputy Chief Accountant who was the head of the Accounts Department of the enterprise. The head of this sub-section was known as Assistant Accountant who had to report to the Accountant, the Head of the "General Accounts" section. There had been two units under this sub-section of each enterprise namely: "Collection, Recording, Analysing and Processing of Data and Information" and "Preparation, Compilation and Circulation of Financial Reports or Statements".

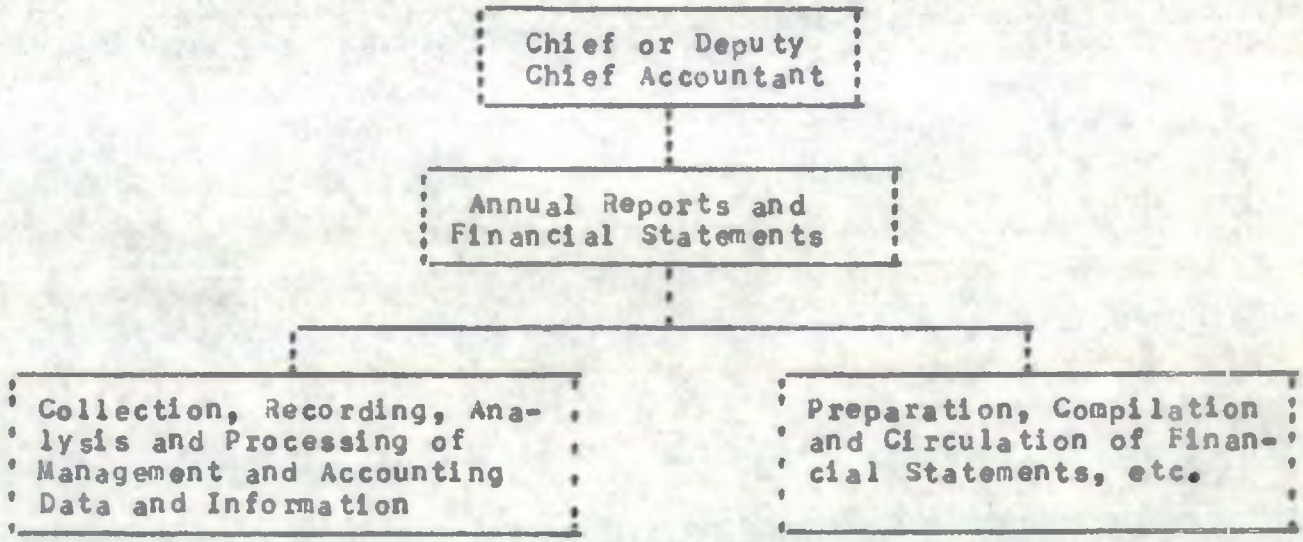
The following figures 2 and 3 show the organization system of MIS that was in operation both at the Corporation level and the Enterprise level respectively.

Fig. 2 Organisation of MIS at the Selected Corporation level



(Source: Organization Manuals of the BJMC, BTMC, BSFIC, BSEC and BCIC).

Fig. 3 Organisation of MIS at the Selected Enterprises level



(Source: Office Memoranda of some selected enterprises under all the selected Corporations.)

The system for management information at the enterprise level is so evolved that a central or main cell receives all information from respective shops or centres at the end of the day. The cell furnishes some of the information in pre-designed forms, to different levels of the enterprise management. It also sends weekly returns stating performances in various fields, indicating critical areas and also stating operational difficulties, if any, to the MIS Division or Department in the Head Office. All these particulars are sent in pre-designed forms at the end of the week. Monthly or quarterly performances in the field of production sales and all other relevant fields are also sent in pre-designed forms to Head Office immediately the month or quarter is over. The problem areas and reasons for failure to attain predetermined target in the field of production, marketing, profit, productivity, etc. are also clearly stated in such reports.

7.3 Operating Functions of Management Information System

Management information system both at corporation and enterprise levels plays a vital staff function in the whole decision making process and operation of the nationalised industries by:[12]

(i) Providing information to the Government for planning, decision-making, policy framing, budget and target fixing and follow-up; (ii) providing information to the corporation management for decision-making, controlling and supervising the enterprises activities in regard to finance, production, sales export, inventory control, procurement, personnel management, capital expenditure,

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[12] Organizational Manuals of Selected Sector Corporations.

incentive and labour welfare target, profit and loss figures, wastage and recovery and (iii) providing information back to the enterprises through feedback system which can enable the enterprises to keep informed about their performances in realation to others and their respective deficiencies.

Major functions of the Management Information System Division at the Corporation level include the following:[13] (a) Introduction of the system in enterprises, (b) Submission of periodical returns with analytical notes and suggestions to management, (c) Furnishing all reports and returns to concerned Ministries and other Agencies and International Organisation, (d) Maintenance of Data Bank, (e) Preparation of Annual Reports, etc.

The major functions of management information system as identified by the samples are also shown in the following Table 7.1.

Table - 7.1

Responses of the Samples regarding Major Functions of Management Information System

Major Functions of Management Information System / Samples	Corporations	Enterprises	Total
Collection, Compilation and Consolidation of Monthly Operational Performances for Board of Directors	14	16	30 (67)
Collection, Compilation and Consolidation of Monthly Preliminary Reports of Industry with Related Information	16	13	29 (64)
Publication of Monthly Bulletin	14	14	28 (62)
Day to Day Information to Authority	13	12	25 (55)
Publication of Quarterly Summary of Products	16	7	23 (51)

(Figures in brackets are percentages of total number of samples)

[13] Ibid.

The above Table 7.1 shows the major functions performed by the MIS division or department which in order of importance were: collection, compilation and consolidation of monthly operational performances for Board of Directors such as preparation of weekly or monthly or quarterly performances reports on the basis of data collected through pre-designed proforma from the enterprises regarding production, sales, capacity utilization, inventory, liquidity, profitability, productivity, manhour utilization, etc. (67 percent); collection, compilation and consolidation of monthly preliminary reports of the enterprises with related information such as preparation of monthly report showing wastage of raw materials, element-wise overhead expenses, etc. (64 percent); publication of monthly bulletin (62 percent); supply of day-to-day information to the proper authorities and maintaining DATA BANK for meeting any quiry on the enterprises or corporation by the top management of the corporation, Government departments, institutional agencies like World Bank, etc. at any time (55 percent) and finally, publication of quarterly summary of products and annual reports of the corporation (51 per cent). The related reports with analytical notes identifying critical areas which require attention of the top management are usually submitted to the top management, Ministry of Industries and Commerce and various Government and other agencies.

Among the various functions performed by the MIS division or department, (i) collection, compilation and consolidation of monthly, preliminary reports of industry with related information and (ii) collection, compilation and consolidation of monthly operational performance for Board of Directors had been treated as being related to accounting dimensions while the remaining functions were treated as being related to non-accounting dimensions.

It is thus evident that the major functions performed by the MIS division or department were more or less to supply information and data relating to various related aspects of both enterprises and corporations to help management at all levels for its decision and control purposes wherein non-accounting functions were highly stressed.

Based on Table 7.1, the responses of the samples as regards the functions of Management Information System Division or Section in the selected nationalised industries, the functions being related to accounting and non-accounting aspects are shown in the following Table 7.2:

Table - 7.2

Responses of Samples regarding the Extent of Accounting and Non-Accounting Functions of Management Information Systems

Functions of Management Information System / Levels of Use	Accounting	Non-accounting	Total	Level of Significance
Corporations	30 (41)	43 (59)	73 (100)	Chi-Square = 0.44
Enterprises	29 (47)	33 (53)	62 (100)	Not Significant at .05 level.
Total :	59 (44)	76 (56)	135 (100)	

(Figures in brackets are column-percentages).

From the above Table it is clear that 56 percent of the samples viewed the functions of Management Information System Division or Section in the selected nationalised industries as related to non-accounting dimensions while 44 percent of the viewed the same func-

tions as related to accounting dimentions. Of the samples at corporation level, 59 percent and 41 percent opined the same functions and accounting are related to non-accounting /dimensions respectively. On the other hand, of the enterprise heads, 53 percent and 47 percent also opined the same functions as related to non-accounting and accounting dimensions respectively.

Then, of the samples who viewed the functions as related to non-accounting aspects 57 percent and 43 percent belonged to the categories of corporations' samples and enterprise heads respectively while of the samples who viewed the same functions as related to accounting aspects, 51 percent and 49 percent belonged to the categories of corporations' samples and enterprise heads respectively.

It is thus evident that there was high degree of use of functions of MIS Division or Section in the nationalised industries as related to non-accounting dimensions both at corporation and enterprise levels. Moreover, there seemed to be no significant relationship between the extent of accounting and non-accounting dimensions of MIS and the levels of use (not significant at .05 level). That is, the opinion variation as regards the extent of functions of MIS Division or Section as related to both accounting and non-accounting aspects was independent of the variations in the levels of such use.

The following Table 7.3 shows the responses of the samples regarding the proper functioning of management information system division/section at the corporation and enterprise levels.

Table - 7.3

Responses of the Samples regarding Proper Functioning of Management Information System

Proper Functioning of MIS Division/ Section / Levels of Use	Yes	No	Total	Levels of Significance
Corporations	14 (70)	6 (30)	20 (100)	Chi-square = 0.02
Enterprises	17 (68)	8 (32)	25 (100)	Not Significant at .05 level
Total :	31 (69)	14 (31)	45 (100)	

(Figures in brackets are column-percentages).

It is evident from the above Table that 69 percent of the samples viewed that the management information system division or section was functioning properly while 31 percent of them viewed the opposite. Of the samples at corporation level, 70 percent opined that MIS division/section functioned properly and 30 percent opined that the functioning of MIS division or section was not proper. Of the enterprise heads, 68 percent opined that the functioning of MIS was proper while 32 percent opined that functioning of MIS division/section was not proper. Then, of the samples who viewed proper functioning of MIS division/section, 55 percent and 45 percent belonged to the categories of enterprise heads and corporations' samples respectively while of the samples who viewed improper functioning of MIS division/section, 57 percent and 43 percent belonged to the categories of enterprise heads and corporations' samples respectively.

It is thus evident from the opinion of the respondents that a majority of them viewed that MIS division or section both at corporation and enterprise levels was functioning properly. But there seemed to be no significant relationship between the extent of proper functioning of MIS division or section and the levels of use (not significant at .05 level). That is, the opinion variation with respect to the extent of proper and improper functioning of MIS division/section was independent of the variations in the levels of such use.

7.4 Structure of Financial and MIS Reports, and Internal and External Users Thereof

Management information system as practised in the nationalised industries had been discussed in the previous section. The various financial reports which were used as tools for the system need to be analysed to know their usefulness for the purpose. Financial reports portray the financial aspects of the activities of an enterprise over a certain period. Since the primary function of the accounting system is to facilitate the administration of the economic activities of an enterprise, this can be done through measuring and arraying the accounting and non-accounting data and information, and communicating the results of this process to various interest groups or users. Financial reports are the means by which this communication process can be fulfilled. One of the basic requirements for effective use of accounting information in managerial financial decisions and control is implementation of good financial reporting system and preparation of reports concerning the financial situations and activities which are essential to most, if not all, managerial policy decisions.[14]

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[14] BATTY, J., Standard Costing, Macdonald and Evans, Ltd., London, 1970, p.145.

The nationalised industrial enterprises under study were required to prepare and present financial and other operating reports, statements and returns in accordance with the statutory provisions of Section VII of the Companies Act, 1913 as adopted in Bangladesh in 1973, requirements of the Sector Corporations and other financial institutions. The respective sector corporations were also required to prepare and disseminate consolidated financial, and other operating reports, statements and returns of the on-going enterprises under their control to comply with the statutory provisions, and requirements of the Controlling Ministries and financial institutions. The identified industrial enterprises which had been formed as the public limited company by the provisions of the Companies Act, 1913 were required to prepare the following statements under sections 130, 131 and 131A by the same Act.[15]

(1) A Profit and Loss Account along with an Appropriation Account, (ii) A Balance Sheet along with a Schedule of Fixed Capital Expenditure, (iii) A Report of the qualified auditor on the above financial statements and (iv) A Report of the Directors on the affairs of the Enterprises.

Further, preparation of the annual reports of the Corporations and their publications in the official gazettee had been made a statutory obligation under the Nationalised Order, 1972.[16] Then the

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15 Ministry of Law and Parliamentary Affairs (Law Division), Government of the People's Republic of Bangladesh, The Companies Act, 1973 (VII of 1913). Reprint 1976.

16 Bangladesh Industrial Enterprises (Nationalised) Order, 1972 (President's Order No. 27 of 1972), The Bangladesh Gazettee, March 26, 1972.

Guidelines on the Relationship between Government and Autonomous Bodies, Corporation and Autonomous Bodies, Corporation and Enterprises under them[17] (Cabinet Secretariat, Cabinet Division, May 15, 1976) also provided that the sector corporations were statutorily required to submit to the Government the Annual Performance Reports, Annual Accounts including Balance Sheets and Profit and Loss Account, Cash and Capital Budget Statements of the Enterprises under their control and management. The individual enterprises in order to comply with the requirements of the controlling authorities and provisions of the statutes as mentioned, were required to prepare and circulate amongst the various interest groups or users a number of reports, statements and returns, of which the following were noteworthy:

(i) Statement of Raw Materials Purchased and Imported;

(ii) Statement of Raw Materials Consumed;

(iii) Production Report;

(iv) Cost of Production Statement;

(v) Statement of Cost of Sale of the Month;

(vi) Sale Report;

(vii) Return on Export Performances;

(viii) Statement of Profit and Loss for the Month;

(ix) Bank Reconciliation Statement of the different accounts;

(x) Trial Balance for the month;

(xi) Statement of Employees Strength;

(xii) Schedule of Non-Operating Income and Recoveries;

(xiii) Schedule of Factory Expenses, Administrative Expenses, Sales and Distribution Expenses;

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17 Guidelines, op.cit.

(xiv) Balance Sheet and Movement of Funds Statement together with Schedules of Fixed Assets and Fund Statements;

(xv) Equipment Production Schedule;

(xvi) Auditor's Report;

(xvii) Director's Report;

(xviii) Statement of ADP Allocation and Utilization;

(xix) Statement of Foreign Exchange Allocation and Utilization;

(xx) Cash Budget;

(xxi) Revenue Budget including Production, Sales, Inventory and Accounts Receivables Estimates;

(xxii) Capital Expenditure Budget;

(xxiii) Capital Expenditure Progress Report;

(xxiv) Head Office Current Account Statement;

(xxv) Wastage Statement;

(xxvi) Sales Tax, Income Tax and Super Tax Returns; and

(xxvii) Statement of Opening and Closing Inventory of Raw Materials, Work-in-Progress, Stores and Spares, and Finished Goods.

The reports and returns mentioned above were of three types viz., Weekly Reports, Monthly/Quarterly/Annual Reports and Special Reports. Reports were dealt with in the following manner:

1. Weekly Reports: A brief report stating the performances of different enterpriese in the field of production, marketing, inventory and cash position, etc., with proper identification of critical areas drawing attention for remedial decisions was put up weekly to the Board of Directors.

2. Monthly/Quarterly/Annual Reports: Monthly reports containing particulars as regards production and sales (monthly and cumulative quantity and value) together with respective target achievements, stock of raw materials, stock of finished goods, cash and bank balance, overdraft, profit and/or loss against targets, manpower, salaries and wages, manhour available and utilization for productive purpose, idle hours, contribution to national exchequer, etc. were sent to the Board of Directors, on the first day of the following month. The MIS Division or Department used to receive such report usually by the 3rd day of the month. With budget usage statements showing actual input items in quantity and value against standard or budget, a cash flow statement was also submitted with the report. Local or enterprise management also used to identify the reasons for failure to attain the targets in any activity in these reports and critical areas with its valued suggestions for remedial measures by the higher authorities were also identified in the reports.

3. Special Reports: These reports were sent by the enterprises identifying critical areas, viz., raw materials shortage, stock piled-up, machine break-down, labour unrest, shortage of cash resources, etc. On receipt of these reports, these were taken up with the appropriate manageement tier immediately for remedial action purposes.

Internal and External Users:

The nationalised industrial enterprises under selected industries in compliance with the statutory provisions and requirements of the respective controlling sector corporations prepare the

above reports, statements and schedules which were also to be communicated to the concerned internal and external users. The internal users which comprised the parties within the enterprises and their respective corporations were as follows:[18]

(i) Government as the shareholders of nationalised industrial enterprises;

(ii) Board of Directors both at the Corporation level and the enterprise level;

(iii) Division Chiefs and Departments Heads of the Corporation and their Zonal Offices, if any;

(iv) Zonal General Managers of the Corporations' Zonal Offices;

(v) General Managers/Deputy General Managers/Managers/ Departmental Heads of the Enterprises;

(vi) Departmental Officers and the Supervisors of the Enterprises, and

(vii) Non-Managerial Staffs and Employees at the Corporation and Enterprise levels.

These internal users would require the financial reports, schedules and statements for the following main purposes:[19]

(a) To adopt strategic and operating decisions of the enterprises;

(b) To forecast and plan important activities of the enterprises;

(c) To effect enterprises' tax planning;

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18 Vide Organization Manuals of BJMC, BTMC, BSFIC, BSEC and BCIC and the Office Memoranda of Selected Enterprises.

19 Ibid.

(d) To control capital and revenue expenditure of the enterprises and

(e) To use for other purposes, viz., to formulate make or buy policy, project bidding policy, wage negotiation policy of the enterprises, etc.

On the other hand, the external users which included parties outside the enterprises and their respective sector corporations were stated as follows:[20]

(i) Controlling Ministries viz., Ministry of Jute, Ministry of Commerce and Industries, etc.;

(ii) Other concerned Ministries, such as Ministry of Planning and Ministry of Finance;

(iii) Planning Commission;

(iv) Other concerned Government departments;

(v) General public;

vi) Trade Creditors for goods supplied and

vii) Trade Association and other Specialist Organisation.

These external users would require the financial reports, returns, statements and schedules for the purposes of which the following are noteworthy:[21]

(a) National Planning viz. Five Year Plans and Annual Development Plans of the country;

(b) National Income Accounting;(c) Government Tax Planning; and

(d) Lending Decision of the Leaders and Creditors.

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[20] Ibid.

[21] Ibid.

7.5 Deficiencies and Shortcomings of Management Information and Financial Reporting System for Management Use of Accounting Information in Financial Decisions and Control

The management information and financial reporting system in operation in the nationalised industrial enterprises in Bangladesh and various financial reports prepared for the various interest groups had been discussed in the earlier sections. Now let us discuss how far the system is instrumental in helping the management to make proper use of accounting information in its financial decisions and control. On scrutiny, it was found that a number of deficiencies and problems were present in the various phases of the existing management information and financial reporting system of the nationalised industries hindering the proper use of data and information generated through the system.

In this respect, the Mintzberg in a study identified four basic weaknesses or deficiencies of management information system which contributed to the perceived dissatisfaction with the way the information was provided and the weaknesses were: (1) The information was too limited, (2) The information was at the wrong level of aggregation, (3) The information was late and (4) The information was unreliable.[22]

In the selected nationalised industries, the MIS division or section either at corporation level or enterprise level was not free from shortcomings and deficiencies which were shown in the following Table 7.4.

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[22] National Association of Accountants (NAA) monograph - "Impediments to the Use of Management Information" by Henry Mintzberg published in 1977.

Table - 7.4

Responses of the Sample regarding the Deficiencies of Financial Reporting and Management Information System Affecting the Use of Accounting Information

Deficiencies and Shortcomings / Samples	Corporations	Enterprises	Total
Ineffective Feedback System	15	18	33 (73)
Lack of Objectivity	12	12	24 (53)
Indetermination of Responsibility Centres	13	10	23 (51)
Incompleteness	13	9	22 (49)
Poor Variance Analysis	10	11	21 (47)
Low Reliability of Data	11	9	20 (44)
Lack of Trained Personnel in MIS	9	9	18 (40)
Ambiguousness	9	7	16 (35)
Inconsistency	8	7	15 (33)
Lack of Computer Services	5	9	14 (31)
Inopportuneness	10	3	13 (29)
Irrelevance	9	3	12 (27)
Lack of Proper Knowledge	-	8	8 (18)
Lack of Coordination	-	5	5 (11)
Others	2	2	4 (9)

(Figures in brackets are percentages of total number of samples)

The above table shows the various deficiencies in the financial reporting and MIS as pointed out by the respondents in order of mangitude. Deficiencies as identified here had accounting and non-accounting dimensions or aspects of which incompleteness, low reliability of data

and poor variance analysis were treated as accounting aspects while remaining deficiencies were termed as non-accounting ones. It thus appears that deficiencies in MIS division/section were highly related with non-accounting aspects. All these deficiencies might affect the proper use by management of accounting information in financial decisions and control.

Based on Table 7.4, the responses of the samples regarding the deficiencies of financial reporting and management information system, the deficiencies being related to accounting and non-accounting aspects or dimensions are exhibited in the following Table 7.5:

Table - 7.5

Responses of the Samples regarding the Extent of Accounting and Non-Accounting Deficiencies of Management Information and Financial Reporting System

Deficiencies & Shortcomings / Levels of Use	Accounting	Non-Accounting	Total	Level of Significance
Corporations	34 (30)	78 (70)	112 (100)	Chi-square = 0.05
Enterprises	29 (32)	62 (68)	91 (100)	Not significant at .05 level
Total :	63 (31)	140 (69)	203 (100)	

(Figures in brackets are column percentages).

It is clear from the above Table that 69 per cent of the samples perceived the deficiencies of the management information and financial reporting system as related to non-accounting dimensions while 31 percent of them perceived the same deficiencies as

being related to accounting dimensions. Of the samples at corporation level, 70 percent and 30 percent viewed the same deficiencies as related to non-accounting and accounting aspects respectively while on the other hand, of the enterprise heads, 68 percent and 32 percent also viewed the same deficiencies as related to non-accounting and accounting aspects. Then of the samples who viewed the deficiencies as related to non-accounting dimensions, 56 percent and 44 percent belonged to the categories of corporations' samples and enterprise heads respectively. On the other hand, of the samples who viewed the deficiencies as related to accounting aspects, 54 per cent and 46 per cent belonged to the categories of corporations'samples and enterprise heads respectively.

It is thus evident from the opinion of the respondents that non-accounting aspects were more responsible for deficiencies of financial reporting of MIS division/section both at corporation and enterprise levels. Moreover, there seemed to be no significant relationship between the extent of accounting and non-accounting aspects of deficiencies of MIS and the levels of use (not significant at .05 level). That is, the opinion variation as regards the deficiencies in MIS division/section as related to non-accounting and accounting aspects was independent of the variations in the levels of use (corporation and enterprise levels).

The deficiencies and shortcomings as identified by the samples are discussed in the following paragraphs:

(1) Ineffective Feedback System:

A management information and financial reporting system is in all respects an information feedback system that can be defined as a system measuring changes in output that leads to a decision resulting in action that affects the output.[23] Information feedback control is essential to the design of a management information system. The term "feedback" in accounting context, refers to information about performances furnished to the persons responsible for those performances.[24] The feedback process is a vital force in between managerial decisions and control. It is the flow of information that allows the actual performances to be controlled in the light of the planned targets. But as opined by 73 percent of the samples the feedback system seemed to be inefficient and ineffective in the nationalised industrial enterprises of Bangladesh due among others, to the fact that the same set of reports, statements and returns prepared and sent to all the different levels of management, did not serve the information needs of the management and of other users in their respective fields as these were not tailored to the users' needs. Then, since the provisions for variance analysis were inadequate to identify the controllable and uncontrollable factors for taking the corrective measures to prevent the occurance of unfavourable situation and variances in future, so there was absence of accountability in the reporting system resulting in failure to fix up the responsibility centres for undertaking appropriate corrective actions against persons and sections held responsible for unfavourable variances.

23 ROSS, JOEL E., Management by Information System, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1970, p.182.

24 CAPLAN, EDWIN H., Management and Behavioural Science, Addison Wesley Publishing Company, 1971, p.88-89.

(2) Lack of Objectivity:

The usefulness of the preparing and presenting the financial reports portraying the financial aspects of the activities of the enterprises is more dependent on their objectives than on their structure. The Study Groups on the Objectives of the Financial Statements stresses that "the basic objective of financial statement is to provide information useful for making economic decisions".[25] But 53 percent of the samples viewed that this basic objective had been overlooked and the statutory regulations and requirements for achievement of the fundamental task of using accounting information and reports for managerial decisions and control in the selected nationalised industries had not been provided for. The reporting system had been designed just to submit the various types of reports as statutory obligation but these were not adequately used for decision purposes by both enterprise and corporation level managements.

(3) Indetermination of Responsibility Centres:

As per provisions of the Integrated Accounting System,[26] the enterprises under the selected sector corporations were required to maintain all books of accounts, prepare and circulate different types of financial reports and divide the factory into 13 sections, each section being named as cost center. These sections would be identified into two broad categories. The first category included cost

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25 American Institute of Certified Public Accountants, "Study Group on the Objectives of Financial Statements", Objectives of Financial Statements, New York, 1973 (This is also known as Trueblood Report).

26 Cf., Manuals of Integrated Accounting System of the Selected Sector Corporations.

centres from 01 through 10 wherein costs like raw materials, power, fuel, salary and wages, depreciation, insurance, inventory, adjustment, etc. would be accumulated. On the other hand, the second category included cost centres from 11 through 13 wherein cost like factory general expenses, administrative expenses and sales and distribution expenses would be assembled. Such categorisation of costs into above mentioned sections or centres would make possible to do proper allocation of the same costs for ascertainment of cost of production both unit-wise and process-wise as well as to adopt proper cost control measures in cases where excessive costs were found to be accumulated. For this purpose responsibility centres were to be fixed. Since the provisions of the Integrated Accounting System Manual were silent on this issue, the present cost centres helped in ascertaining the cost of production only. As such 51 percent of the samples opined that due to indetermination or absence of responsibility centres, proper cost control measures could not be adopted.

(4) Incompleteness:

The management information and financial reporting system need be designed in such a way that the information presented in the statements and reports were complete so as to provide the internal and external users, as far as possible with overall picture of the economic activities of the enterprises.[27] Because, the incomplete reports with inadequate data/information may not be useful in managerial decisions and control. The usefulness of accounting reports is reduced because certain important and vital information are not disclosed and for instance one may refer to non-disclosure of inventory valuation methods, depreciation rates and non-indication of the move-

[27] ACCOUNTING STANDARDS SOCIETY, The Corporate Report, Institute of Chartered Accountants in England and Wales, London, pp. 28-30.

ment of the reserves, etc.[28] In the nationalised industrial enterprises of Bangladesh, the Balance Sheet and Profit and Loss Accounts were prepared showing the aggregative picture of the economic activities of the enterprises in accounting and monetary figures only and the items had also not been properly arranged such as, the gross revenues had not been shown with a break-up of product line and major business activities in the Profit and Loss Account; the valuation of the closing inventory had been described in the Balance Sheet at cost or market price whichever was lower, but the method applied for relating the different costs of goods to periodic revenues had not been disclosed; the amount of depreciation had only been shown in Balance Sheet but not the method for providing for depreciation; the intangible and fictitious assets like goodwill, trade marks and patents had been shown in the Balance Sheet as the fixed assets, the preliminary expenses and underwriter's commission had also been shown as fixed assets, etc. 49 percent of the samples perceived that such incomplete presentation was not fair and helpful for managerial decisions and control.

(5) Poor Variance Analysis:

Variance analysis is an important tool for managerial decisions and control purpose. The Manuals of Integrated Accounting System had made provisions for preparation of three important budgets namely, revenue budget, cash budget and capital budget. Every industrial enterprise under study had to calculate, in accordance with the requirements of Integrated Accounting System, the variances between the actual costs which might be favourable or unfavourable and the

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[28] HABIBULLAH, M., 'Accounting as a Tool of Communication', op.cit., p. 5.

budgeted costs, at every three to six month's interval. But the provision for further analysis of the variances, known as variance analysis had not been made essential in the Manual of Integrated Accounting System resulting in failure to identify the nature of variances classified into favourable and unfavourable, and the causes of such variances indentifying into controllable and uncontrollable groups which could be communicated to the higher authorities concerned for necessary actions. Such poor variance analysis as opined by 47 percent of the samples led to the absence of effective cost control measures as well as ineffective use of accounting information in managerial financial decisions and control.

(6) Low Reliability and Cosmetization of Data:

Reliability and accuracy of accounting data and information is a prerequisite for assessing the real position of the enterprises as well as for using them in managerial decisions and control. The information and data presented should be reliable and accurate so that the users should be able to assess the degree of confidence that may be reposed on it.[29] But it is alleged that accounts are sometimes "cooked up" and "window dressed" to make results more impressive by unscrupulous management in developing countries.[30] In the selected nationalised industries, the accounts in many instances, had also been "cooked up" and "window dressed" and cooking up of accounts was the usual practice of accountants in the non-corporate

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[29] EURICO, VIGANS, "Information for Properties and Others", National Papers, International Congress of Accountants (19th) 1972, Sydney, Australia, pp 322-324.

[30] ASSC, The Corporate Report, op.cit., pp.28-30.

sector.[31] This allegation was also prevalent in the case of some of the selected nationalised industrial enterprises. The accounting reports were cosmetized because these were prepared by applying all the techniques and skills so that the information thereof were not easily understandable and it might be mentiond here that one accountant refused to give the author a copy of his financial statements on the ground that the author would not understand the data since he got it prepared not to be understood by others.[32] It is further alleged that in one of the big enterprises under the selected sector corporation, accounting was victimised in that the accountants of the said enterprise treated some of the revenue expenses as the capital expenses absorbing less cost in production in order to show profits as per the Corporation's directives.[33] As such, the wishes of the corporation management in some cases, beat the legal provisions relating to the preparation of financial reports and statements, thereby the low reliability and accuracy of accounting information hampered decision making and control function to a great extent as also viewed by 44 percent of the samples.

(7) Lack of Trained Personnel:

Another important deficiency in management information and financial reporting system in the selected nationalised industries was lack of trained personnel. It is evident from Table 7.4 that 40 per cent of the samples viewed that there was lack of trained personnel

31 HABIBULLAH M., "Human Aspects of Accounting", The Dacca University Studies, Part-A, Vol. XXII, Dacca, June 1974, pp.19-20.

32 HABIBULLAH M., "Accounting As A Tool of Communication", op.cit.p.8.

33 RAHMAN, MAHDUDUR, "A Note on Controls and Accounting in Nationalised Corporations in Bangladesh", The Journal of Management, Business and Economics, Vol.4, No.1, January 1978, IBA, Dacca University, pp. 80-81.

in the existing information system thus hampering the reprocess and proper use of accounting information for management decisions and control purpose in the selected nationalised industries.

(8) Ambiguousness:

The accounting information as presented in the financial reports and statements should not be ambiguous and be clearly understood by the management and other users of such reports before taking decisions. The essential function of accounting is to provide unambiguous accounting information about complex business activities to a variety of users.[34] Of course, unambiguousness or understandability does not mean that information should be presented in the most raw form or in rudimentary terms. Rather, it does mean that judgement needs to be applied in holding the balance between the need to ensure that all factual information are disclosed and the need to avoid confusing the users by the provisions of too much detail.[35] In Bangladesh, the accounting system as stated earlier in the nationalised industries seemed to be not highly sophisticated and the analysis of the various items of the Balance Sheet and Profit and Loss Account Statement was not widely deem done to make the generated accounting data more understandable to the users. The practice of showing all the data pertaining to the Balance Sheet in graphic and analysis form was relatively rare in the identified nationalised industries. As such 35 percent of the samples perceived that the Balance Sheet and Profit and Loss Account had failed in serving the management needs for accounting

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34 ANDERSON, ARTHUR AND CO., Objectives of Financial Statement for Business Enterprises, London, 1972, p.10.

35 ASSC, The Corporate Report, op.cit., pp.28-30.

information in decision-making and control due to same ambiguousness.

(9) Inconsistency:

One of the important principles of accounting is the principle of consistency which implies that the methods of measuring and valuation applied should remain consistent year after year. The main reason for this is to facilitate comparison of accounting information and data available in financial statements and reports relating to different periods, either of different companies or within a single company.[36] If there is inconsistency in methods appliad, the results disclosed by financial statements will be unreliable. But since the Companies Act of 1913 as adopted in Bangladesh was silent on the issue, it was difficult to know from the records, documents and statements of the enterprises whether the principle of consistency in accounting methods and procedures had been practised or not in the case of the identified nationalised industries. Auditors' reports also did not contain any implied or expressed reference to this principle. Then, the financial reports did not disclose the accounting methods used in arriving at net profit and in showing the financial position of the enterprises. As such 33 percent of the samples perceived that one might doubt about the awareness of the accountants of the selected enterprises in regard to this principle of consistency.

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36 SANDILANDS COMMITTEE, Report of the Inflation Accounting Committee, London, 1975, para 243.

(10) Lack of Computer Services:

Use of computer services for proper functioning of management information and financial reporting system is very essential in today's complex business operations. The computer can make it feasible for management to use mathematical and statistical tools for analysing accounting information for business decisions.[37] But despite the fantastic growth of computer applications, there was acute lack of such services in the financial reporting and management information system division or section in the selected nationalised industries as opined by 31 percent of the samples, thus posing difficulties at times in storage, retrieval, analysis and reporting of various sorts of data and as such, their use for management decisions and control purposes is hampered to great extent.

(11) Inopportuneness:

The usefulness of financial reports is, to a great extent, dependent on the availability of such reports at the disposal of the management and other user groups at the opportune moment. But timely publication of financial statement is not a common practice in developing country.[38] It is observed that the accountants of the nationalised industrial enterprises in Bangladesh usually did not take cognizance of the importance of timely reporting. It was found that the average timelag between the closing of the financial year and the presentation

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37 ANDERSON, DONALD L. and RAUN, DONALD L., Information Analysis in Management Accounting, John Wiley & Sons, Inc., New York, (C) 1978.

38 TALUKDAR, M.Y., "An Approach to Inflation Accounting in the Context of Developing Economies", op. cit., p. 56.

of the financial reports to the management and other users had been about six months. It is evident from the above Table that 29 percent of the samples opined that this delay in reporting might cause serious difficulties in the way of adopting financial and other decisions timely and feedback of accounting information in the organization.

(12) Lack of Proper Knowledge:

Another important deficiency in the management information and financial reporting system of the selected nationalised industries was lack of proper knowledge about data preparation, generation and processing stages as viewed by 18 percent of the samples. Such shortcoming might hamper the collection, compilation and consolidation of various sorts of data and thus stand in the way of their use by management in its decisions and control functions.

(13) Irrelevance:

Relevance is another feature which expresses the fundamental impression that corporate reports should seek to satisfy information needs of interest groups to a great extent.[39] But the reports and statements prepared by the enterprises within the legal framework of the corporations under study were considered insufficient to serve the information needs of the management in its decision-making and control functions in particular. It is fact that different users need different sets of data and information for different purposes. But 12 percent of the samples opined that the nationalised industrial enterprises used to prepare the same sets of reports and statements to be presented to the different interest groups resulting in

[39] ASSC, The Corporate Report, ICAEW, London, 1975, pp.28-30.

irrelevant reporting to them and serving no real purpose of the different users particularly the management in its decisions and control functions.

(14) Lack of Coordination:

Another noteworthy shortcoming of the management information and financial reporting system in the selected nationalised industries was lack of coordination among various departments for proper collection, compilation and consolidation of accounting and non-accounting data pertaining to the business activities. It is evident from Table 7.4 that 11 percent of the samples viewed that such deficiency in the management information system might hamper the use of accounting data for managerial decisions and control purposes to a great extent.

(15) Miscellaneous:

Some of the samples (9 percent) perceived that absence of comments and observation on the MIS and the relevant financial reports by competent authorities might also hamper the proper use of accounting information in management decisions and control function.

The deficiencies or weaknesses of management information and financial reporting system hindering the proper use by management of accounting information in the financial decisions and control of the selected nationalised industries had been identified above. In the following chapter, however, the extent of use of accounting information in financial decisions and control areas and the impact of such use on the financial performances of the selected industries would be examined.

CHAPTER - 8

EXTENT OF USE OF ACCOUNTING INFORMATION IN FINANCIAL DECISIONS AND CONTROL AND IMPACT OF SUCH USE ON THE FINANCIAL PERFORMANCES OF THE NATIONALISED INDUSTRIES

Capital expenditure decisions, working capital decisions and profit decisions vis-a-vis management use of accounting information in the respective decisional areas had been discussed and analysed in chapters 4, 5 and 6 respectively. The present chapter relates to the investigation into the extent of use of accounting information in financial decisions and control, and the impact of such use or otherwise on the financial performances as seen through profitability of the selected nationalised industries for the period under review.

8.1 The Need for Performance Evaluation

There is a growing need for performance evaluation of development projects or industries arising from the expanding role of nationalised sector which provides a wide range of goods and services in the society. Evaluation is useful not only for accountability, but also for improvement of performances in broader terms, given greater understanding on why such activities have succeeded or failed in the past.[1] Evaluation can, therefore, provide a pragmatic response to the problems of nationalised industries. In the selected nationalised industries, the need for having criterion of performance evaluation is more important than

[1] SKEATES, R. and WHITLAM G., "The Role of Performance Evaluation in the Development Process", Asian Development Review, Vol. 1, No. 2, 1983, Asian Development Bank, Philippines, p.59.

that in private industrial enterprises where profitability is often regarded as providing a rough-and-ready measure. Management needs to know how far the enterprise for which it is responsible is improving or deteriorating in respect to its performances, and how far that improvement or deterioration can be ascribed to its virtues or vices. As such, we require methods of measuring and judging the enterprise performances by identifying faults and short-falls and discussing ways of correcting them, and of assessing the final contribution made by the enterprises to the development of total national economy.[2]

On the issue of performance evaluation and its related problems, the First Five Year Plan of Bangladesh states: "Clearly defined objective must be set for each sector. Production targets, efficiency levels, cash surplus generation and other defined objectives should be spelt out for the corporations and by the corporations for the enterprises. Absence of precise targets makes it difficult to evaluate performance, motivate workers and other lapses".[3] It is seen that the Planning Commission appreciated the necessity for a performance criterion which, as Q.K. Ahmed[4] has pointed out, as is capacity utilization. In a situation of extreme scarcity of commodities as has been the case in Bangladesh, this criterion is of high

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2 HANSON, A.H., Managerial Problem in Public Enterprise, Asia Publishing House, Bombay, (c) Indian Institute of Public Administration, New Delhi, 1962, p.94.

3 ALAMGIR, MOHIUDDIN, "Nationalised Industries of Bangladesh", The Bangladesh Development Studies, BIDS, Dacca, Vol. II, July 1974, pp. 708-709.

4 AHMED, Q.K., "Aspects of Managements of Nationalised Industries, in Bangladesh", The Bangladesh Development Studies, Vol. II, Bangladesh Institute of Development Studies, Dacca, July 1974, p. 695.

relevance. But this cannot be the only criterion for evaluating enterprise performance in the long run. It has been pointed out that the indicators of enterprise performances should be evolved within the framework of national objectives.[5]

In the First Five Year Plan however, there was no clear cut indication of a performance evaluation, except the vague reference to the efficiency of performance which seems to have been used in the sense of maximum utilization of capacity. If the industries are run on efficient cost curves, then it can be considered a correct measure for "efficiency of performance". But in post-liberation period, most industries were operating on higher cost curves in real terms as compared to 1969-70 due to various reasons, such as, lack of appropriate production planning, ineffective managerial decisions and control, lack of effective budgeting and inventory control, excess labour costs, etc.[6] Therefore, the goal of enterprise efficiency should be defined to mean maximization of output subject to optimum utilization of resources.

There is, as such, no easy solution to the problem of choice of indicators for enterprise performances. Indicators, such as, the volume of output, value of output produced, volume and value of trade turnover, index of turnover of circulating assets, etc., were used in the socialist countries from time to time. But none of them was

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5 ALAMGIR, MOHIUDDIN, "Nationalised Industries of Bangladesh", The Bangladesh Development Studies, BIDS, Dacca, Vol. II, July 1974, pp. 708-709.

6 AHMED Q.K., "Aspects of Management of Nationalised Industries in Bangladesh", op.cit..

found totally satisfactory. Consequently, the socialist planners had to think about alternatives and profitability as a criterion for performance evaluation was accepted by Yugoslavia in 1952, by Hungary in 1957, by the USSR in 1967 and by the European Socialist Countries in the late 1960's and even in China, 'profitability' was accepted as one of the criteria for performance evaluation as early as 1957.[7] For it is claimed that the 'profitability criterion' takes into consideration not only the input sides but reflects the efficiency of all different operating enterprises together.

Since rapid growth of output and income and its equitable distribution sustained by a high rate of accumulation are necessary precondition to attain the basic national goal of reducing poverty in Bangladesh, profit maximization can be the operational goal in the nationalised industries sector. For judging the performances of the nationalised industries, all variants of 'profit' criterion might be accepted and used. It appears from the official announcement regarding the measure of success of the sector corporations that profitability had been accepted as an important indicator of performance evaluation in the nationalised industries.

The Planning Commission[8] of Bangladesh has stressed the need for running the nationalised industrial enterprises as the manufacturing concerns based on commercial principles. The Government has also emphasized the profitability as the criterion for measuring the management's performance in such enterprises. In Pakistan, too,

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[7] SALAHUDDIN, KHALEDA, "Choice of Criteria for Performance Evaluation in the Nationalised Industries of Bangladesh", Political Economy, Vol. 2, No. 1, Conference 1976, Dacca, p. 327.

[8] PLANNING COMMISSION, GOVERNMENT OF THE PEOPLES' REPUBLIC OF BANGLADESH, The First Five Year Plan. 1973-78, Dacca, 1973, p.259.

profitability has been advocated as the best criterion for evaluation of performance of the public sector enterprises.[9]

Under the circumstances, it may be said that profitability might be taken as the criterion for evaluating or measuring the performances of the selected nationalised industries. Various criteria either individually or collectively could be used to assess the performances of the industrial enterprises. Although there was no set criterion from the Government, relevant authorities emphasized on different criteria.

The following Table 8.1 shows the responses of the samples as regards criteria for evaluating performance of the selected industries:

Table - 8.1

Responses of the Samples regarding Criteria for Performance Evaluation

Performance Evaluation Criteria \ Samples	Corporations	Enterprises	Total
Financial Profitability	15	19	34 (75)
Productivity Effectiveness	13	16	29 (64)
Social Profitability	12	14	26 (58)
Maximization of Foreign Exchange Earnings	2	6	8 (18)

(Figures in the brackets are percentages of total number of samples).

[9] SYED, REZA H. (Ed.), Role and Performance of Public Enterprise in the Economic Growth of Pakistan, Investment Advisory Centre of Pakistan, pp. 137-138.

The Table shows that 75 percent of the samples reported financial profitability, 64 percent reported productivity effectiveness, 58 percent reported social profitability and only 18 percent reported maximization of foreign exchange earnings as the criteria for assessing performance of the enterprises. Among these criteria, financial profitability and maximization of foreign exchange earnings had been treated as accounting criteria while social profitability and productivity effectiveness were treated as non-accounting criteria. Thus, it is evident that financial profitability was given more importance than other criteria. In this light, the impact of use by management of accounting information in financial decisions and control on the financial profitability of the nationalised industries would now be examined.

Among the measures of profitability as pointed out earlier, most classical writers[10] have considered Return on Sales (ROS), Return on Capital (ROC)employed and Return on Investment (ROI) as best measures of profitability and these indices had been defined in Chapter-2. As such, the purpose of the present study is to examine the impact of the use of accounting information in financial decisions and control on the financial performances of the selected industries and the return on sales (ROS), the return on capital employed (ROC) and return on total investment (ROI) had been adopted as the measures of the financial performances of the selected nationalised industries.

10 SHARMA, B.S., Financial Planning in Indian Public Sector : A Management Approach, op.cit., p.141; KUCHHAL, S.C., Financial Management: An Analytical and Conceptual Approach, op.cit., p.62; MOHSIN, M., Financial Planning and Control, op. cit., p.169; KESHAVA, G. P., Readings in the Operational Problems of Public Enterprises, Vol. I, op.cit., p.14; WALKER, ERNEST W., Essentials of Financial Management, op.cit., p.30 and TAYLOR A.H. and PALMER, R.E., Financial Planning and Control, Pan Books Ltd., London, 1969, p. 165.

8.2 Variables Measuring the Extent of Use of Accounting Information in Financial Devisions and Control and Impacts of Such Use on Profitability

The criteria used for evaluation of the financial performances of the enterprises are the ultimate result of the various means and methods employed by management in decision making and controlling the business operations of the enterprises.[11] The criterion of profitability or any other measure is dependent on the adequacy and effectiveness of such means and methods for management decision making and control functions. Profitability, the widely accepted criterion is however, affected by various factors. Argenti[12] has classified all possible factors leading to profitability into various groups, namely, investing capital, incurring capital expenditure, overcoming obstacles, exploiting opportunities, using strengths, overcoming weaknesses, applying management techniques, and organizing profit plans, of whom the factors related with financial decisions and control seem to be worthmentioning. Of course, there are large number of contributory factors affecting the profitability.[13] Here, the use of accounting information in financial decisions and control had been taken as one of the many contributory variables influencing the profitability.

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11 MOHSIN, M., Financing and Control, op.cit., p.1.

12 ARGENTI, J., Corporate Planning : A Practical Guide, George Allen and Unwin Ltd., London, 1969, p.165.

13 RONAN, W.W. and PRIEN E.P., "An Analysis of Organizational Behaviour and Organization Performance", Organizational Behaviour and Human Performance, February, 1973, pp. 78-79.

In the other words, the impact of the identified variables was not only dependent on the use of accounting information in financial decisions but on many factors and here, use of accounting information had been accepted as one of the factors contributing to profitability.

The variables which are directly or indirectly related with the managerial use of accounting information in financial decisions and control thus influencing the accepted performance evaluation criterion i.e. profitability, are listed below:

(i) Capital expenditure requirements decision,
(ii) Capital structure decision,
(iii) Capital expenditure financing decision,
(iv) Capital expenditure control,
(v) Working capital requirements decision,
(vi) Inventory decision,
(vii) Accounts receivable decision,
(viii) Cash decision,
(ix) Working capital financing decision,
(x) Working capital control,
(xi) Sales target and selling price decision,
(xii) Cost of production decision,
(xiii) Operating expenses decision and
(xiv) Profit targets decision.

8.2(a) Capital Expenditure Decisions and Control

There are four variables related with capital expenditure decisions and control area, viz., capital expenditure requirements decision capital structure decision, capital expenditure financing decision and capital expenditure control. These were discussed in detail in Chapter 4. The extent of use of accounting information in each of these variables and the impact of such use or otherwise on the profitability of the selected industries had been examined in the following pages.

(i) Extent of Use:

Four questions (No. 15 to 18 of Appendix VIII in Part-B) were used to measure the extent of use of accounting information in capital expenditure decisions and control. The use of Likert's five point scales enabled the scores on the responses of these questions to be summed up. The summation which indicated the extent of such management use was shown in the Tables 8.2, 8.3, 8.4 and 8.5 prepared as per questions 15, 16, 17 and 18 in Part-B of the same Appendix respectively.

It was observed that there was high use of accounting information in capital expenditure requirements decision , while there was low use of accounting information in capital structure decision, capital expenditure financing decision and capital expenditure control.

(ii) Impact of Use:

The impact of use of accounting information in capital expenditure decisions and control on the profitability had been measured by Pearson's correction coefficients (r). This was done by correlating the extent of use of accounting information in four variables of capital expenditure decisions, viz., capital expenditure requirements, capital structure, capital expenditure financing and control with each of the three profitability indexes, viz., return on sales (ROS), return on capital employed (ROC) and return on investment (ROI) and the correlation coefficients had been shown in the Appendix No.VII.

The impact of use of accounting information in each of the above four variables had been discussed below.

It is observed from the Appendix VII that all the values of the correlation coefficients were positive (though not significant at .05 level) except the value of the correlation coefficient between use of accounting information in capital structure decision and ROC. It is further observed that the values of the correlation coefficients of ROC were less than those of ROS and ROI except one related with the use of accounting information in capital expenditure requirements. It is thus evident that the use of accounting information in capital expenditure decisions seemed to have had positive impacts on the profitability indexes.

(1) Capital Expenditure Requirements Decision

Capital expenditure requirements decision denote the determination of funds required for starting a project or meeting capital expenditure required for establishment of a new project or BMR or expansion. The managerial echelon responsible for directing the use of enterprise reasources or capital, needs an understanding of the concepts and elements of capital expenditure requirements in order to use accounting information effectively for its decision. Of course, as an expert in the use of accounting information, the accountant can advise management in choosing and understanding the various accounting and non-accounting data and information relevant to capital expenditure requirements decision. However, such decision is directly related to the cost of the project in the form of capital expenditure thus affecting the cost of production and returns of capital of the project. But the shortcomings and other related problems in the use of accounting information in capital expenditure requirements decision and control would ultimately affect the capital expenditure of the project as well as cost of production, and thereby the profitability of the enterprises would be adversely affected to the same extent.

Extent of Use of Accounting Information in Capital Expenditure Requirements Decisions

The following Table 8.2 shows the response of the samples regarding the extent of use of accounting information in capital expenditure requirements or estimates.

Table - 8.2

Responses of the Samples regarding the Extent of Use of Accounting Information in Deciding Capital Expenditure Requirements

Levels of Use \ Extent of Use	High	Low	Total	Level of Significance
Corporations	8 (40)	12 (60)	20 (100)	Chi-square = 1.14
Enterprises	14 (56)	11 (44)	25 (100)	Not Significant at .05 level
Total :	22 (49)	23 (51)	45 (100)	

(Figures in brackets are column-percentages).

From the above Table, it is clear that 49 percent and 51 percent of the samples viewed high use and low use of accounting information in capital expenditure requirements or estimates decision. Of the samples at the corporation level, 40 percent viewed high use while 60 percent of them viewed low use and of the samples at enterprises (enterprise heads), 56 percent viewed high use while 44 percent viewed low use. Of the samples who viewed high use, 64 percent and 36 percent belonged to the categories of the enterprise heads and the corporations' samples respectively. On the other hand, of the sample who viewed low use, 52 percent and 48 percent belonged to the categories of the corporations' samples and the enterprise heads respectively. It thus appears that there was high use of accounting information for capital expenditure estimates in enterprises followed by corporations. But there seemed to be no significant relationship between the extent of use and the level of use (not significant at .05 level) of accounting information in capital expenditure estimates or requirements.

That is, high use and low use of accounting information in capital expenditure requirements or estimates were independent of their levels of use. In other words, opinion variation as regards the extent of use of accounting information was not dependent on the variations in levels of use (corporation and enterprise levels).

Impact of Use:

The impact of use of accounting information in capital expenditure requirements on the profitability of the selected nationalised industries had been measured by showing Pearsons' correlation coefficient (r) between the extent of use of accounting information in capital expenditure requirements and the profitability indexes/measures such as ROS, ROC and ROI. This correlation coefficient had been calculated and shown in Appendix VII. It is evident that the correlation coefficients showed positive linear relationship between them indicating that use of accounting information in capital expenditure requirements had favourable impacts on the return on sales, return on capital and return on investment. But there seemed to be no significant relationship between the use of accounting information in this particular area and profitability (not significant at .05 level). Thus it can be concluded that profitability was influenced by the use of accounting information in capital expenditure requirements of the industries under study and the unfavourable influence thereof resulted in over capitalization in the capital expenditure or fixed assets involving unfavourable input-output ratio thus adversely affected the profitability of the industries under study. It was observed in Section 3(a) of Chapter 4.

(ii) Capital Structure Decision

There is a close relation between the capital structure decision and the profitability of the industries too. The capital structure decision has got both favourable and unfavourable impact on the profitability. The unwise capital structure decision may have an unfavourable impact on it. But it was pointed out earlier in Chapter 4 that the capital structure decision was not sound at all in the case of most of the nationalised industries in Bangladesh. Because in taking such decision, the Government neither takes into account the nature and exact capital expenditure requirements nor adopts any definite or appropriate principle based on accounting information for the purpose. Rather, the Government had fixed up 50:50 distribution between debt capital and equity capital to be pursued by the nationalised industries. As per opinion of the samples mentioned earlier some related factors such as cost of capital, risks and returns, nature and requirements of the project or capital expenditure, availability of local and foreign exchange funds, etc. were not properly taken into consideration while deciding the capital structure for the selected industries.

Extent of Use of Accounting Information in Capital Structure Decision (or Debt-Equity Determination):

The following Table 8.3 shows the extent of use of accounting information in determination of capital structure.

Table - 8.3

Responses of Samples regarding the Extent of Use of Accounting Information in Capital Structure Decision

Levels of Use \ Extent of Use	High	Low	Total	Level of Significance
Corporations	5 (25)	15 (75)	20 (100)	Chi-square = 1.75
Enterprises	11 (44)	14 (56)	25 (100)	Not Significant at .05 level
Total :	16 (36)	64 (64)	45 (100)	

(Figures on brackets are column-percentages).

From the above Table it is clear that 64 percent of the samples perceived low use while 36 percent of them perceived high use of accounting information in determination of capital structure. Of the corporations' samples, 75 percent perceived low use while 25 percent of them perceived high use and of the enterprise heads, 56 percent perceived low use while 44 percent perceived high use of accounting information in capital structure decision. Of the samples who perceived low use, 52 percent belonged to the category of corporations' samples and 48 percent belonged to the category of enterprise heads. On the other hand, of the samples who perceived high use, 69 percent and 31 percent belonged to the categories of enterprise heads and corporations' samples respectively. It is thus evident that the low degree of use of accounting information in capital structure decision was observed both at corporation and enterprise levels.

But there was no significant relationship between the extent of use and the levelsof use (not significant at .05 level). That is, opinion variation as regards the extent of use of accounting information in capital structure determination or decision was not dependent on the variations in the levels of use.

Impact of Use:

The nature of impact of use of accounting information in capital structure decision on the profitability was measured by showing Pearson's correlation coefficient (r) between the extent of use of accounting information in capital structure decision and profitability. In order to show such impact, the correlation between the extent of use of accounting information in capital structure decision and each of the three profitability indexes, viz., ROS, ROC and ROI, had been calculated in the Appendix No. VII. The vital issue as evident from the Appendix was that there was positive linear relationship between this particular use of accounting information and two profitability indexes viz., ROS and ROI pointing out that the use of accounting information in capital structure decision had limited favourable effects on the return on sales and return on investment. On the otherhand, it was also evident that there was negative relationship between this particular use of accounting information and return on capital employed indicating that such use had an adverse effect on the ROC of the industries concerned. Moreover, there seemed to be no significant relationship between this particular use and profitability (not significant even at .20 level). Thus, it can be said that ROS and ROI were influenced while ROC was independent of the

use of accounting information in capital structure resulting in excessive long-term loans due to such situations. This was observed from the analysis of secondary data in Section 3(b) of Chapter 4.

(iii) Capital Expenditure Financing Decision

The choice for decision in capital expenditure financing relates to the relative proportion of the enterprise's total finance to be raised in the form of equity and debt, local currency and foreign currency and Government and institutional finance. Factors considered for the purpose might cover both accounting and non-accounting data like economic viability and profitability, debt-equity ratio, availability of lined-up credit, efficient management, total net worth, potential market, etc. The decision of the form of financing capital expenditure might have effects on the profitability of the concerns under study.

Extent of Use of Accounting Information in Capital Expenditure Financing Decision:

The following Table 8.4 shows the responses of the samples regarding the extent of use of accounting information in capital expenditure financing decision:

Table - 8.4

Responses of the Samples regarding the Extent of Use of Accounting Information in Capital Expenditure Financing Decision

Levels of Use / Extent of Use	High	Low	Total	Level of Significance
Corporations	6 (30)	14 (70)	20 (100)	Chi-square = 4.01
Enterprises	15 (60)	10 (40)	25 (100)	Significant at .05 level
Total :	21 (47)	24 (53)	45 (100)	

(Figures in brackets are column-percentages).

From the above Table it is clear that 53 percent and 47 percent of the samples perceived low use and high use of accounting information in capital expenditure financing decision respectively. Of the samples at corporation level, 70 percent and 30 percent viewed low use and high use of accounting information respectively. On the other hand, of the enterprise heads, 40 percent and 60 percent opined low use and high use of accounting information respectively. Then, of the samples who opined low use, 58 percent and 42 percent belonged to the categories of corporations' samples and enterprise heads respectively. On the other hand, of the samples who opined high use, 71 percent and 29 percent belonged to the categories of enterprise heads and corporations' samples respectively. It is evident that the low degree of such use of accounting information was observed at the corporations level while high use at the enterprise level.

Thus, there was a significant relationship between the extent of use and the levels of use (significant at .05 level). That is, opinion variation as regards the extent of use of accounting information in capital expenditure financing decision was not independent of the variations in the levels of use of accounting information. This is because of high importance being given to the capital expenditure financing at corporation level only.

Impact of Use:

The impact of the use of accounting information in capital expenditure financing decision on the profitability of the nationalised industries can be measured by computing Pearson's correlation coefficient (r) between the extent of use of accounting information in capital expenditure financing decision and profitability. In order to show the nature of such impact, the correlation between the extent of use of accounting information in capital expenditure financing decision and each of the three profitability indexes, viz., ROS, ROC and ROI, had been calculated in the Appendix No. VII. It is evident from the same appendix that the correlation coefficients showed positive linear relationship between the use of accounting information on the same purpose and each of the profitability indexes signifying that the use of accounting information in capital expenditure financing decision had favourable impact on the profitability of the selected industries. Moreover, there seemed to be no significant relationship between the use of accounting information for the same purpose and profitability (not significant at .05 level). Thus, it can be concluded that the profitability of the industries concerned was not

significantly influenced by the use of accounting information in capital expenditure financing decision resulting in excessive institutional financing for the purpose. The same situation was observed in Section 3(c) of Chapter 4.

(iv) Capital Expenditure Control

In order to attain the target within the time and resource constraints as well as to bring to light any variation from the actual, capital expenditure requires to be strictly controlled by adopting some control measures. The effectiveness or otherwise of budgetary and other control measures based on past accounting and non-accounting data might affect the very profitability of the industries under study.

Extent of Use of Accounting Information in Capital Expenditure Control:

The following Table 8.5 shows the responses of the samples regarding the extent of use of accounting information in capital expenditure control:

Table - 8.5

Responses of the Samples regarding the Extent of Use of Accounting Information in Capital Expenditure Control

Levels of Use \ Extent of Use	High	Low	Total	Level of Significance
Corporations	5 (25)	15 (75)	20 (100)	Chi-square: 2.13
Enterprises	12 (48)	13 (52)	25 (100)	Not significant at .05 level.
Total :	17 (38)	28 (62)	45 (100)	

(Figures in brackets are column-percentages).

From the above Table it is clear that 62 percent of the samples viewed low use while 38 percent of them perceived high use of accounting information in capital expenditure control. Of the samples at corporation level, 75 percent and 25 percent perceived low use and high use respectively. On the other hand, of the enterprise heads, 52 percent and 48 percent viewed low use and high use of accounting information for the purpose respectively. Then, of the samples who perceived low use, 54 percent belonged to the category of corporations' samples while 46 percent of them belonged to the category of enterprise heads. On the other hand, of the samples who perceived high use, 71 percent belonged to the category of enterprise heads and 29 percent belonged to the category of corporations' samples.

So it is evident that there was low degree of use of accounting information in capital expenditure control at corporation level followed by the enterprise level. But, there seemed to be no significant relationship between the extent of use and the levels of use (not significant at .05). That is, opinion variation as regards the extent of use of accounting information in capital expenditure control was independent of the variations in the levels of use.

Impact of Use:

The nature of impact of use of accounting information in capital expenditure control on the profitability of the nationalised industries can be measured through Pearson's correlation coefficient (r) between the extent of such use and profitability indexes. In order to show such impact, the correlation between the extent of use of accounting information in capital expenditure control and each of

the three profitability indexes, viz., ROS, ROC and ROI, had been calculated and shown in Appendix No. VII. The important issue as evident from the same Appendix was that there was positive linear relationship between the same correlation coefficients thus indicating that the use of accounting information had favourable effects on ROS, ROC and ROI. However, there was no significant relationship between the use of accounting information for the same purpose and the profitability (not significant at .05 level). But correlation coefficients between the extent of use of accounting information in capital expenditure control and return on sales, and between the use of accounting information for such purpose and return on capital employed, were found to be significant at .10 level. Thus,it can be deduced that the use of accounting information in capital expenditure control had an influence on the profitability. But lack of proper use of budgetary and treasury control techniques affected adversely the profitability of the industries under study. The same position had been noted in Section 3(d) of Chapter 4.

Combined Impact of Use:

In order to show the nature of impact of the use of accounting information in capital expenditure decisions and control as a whole on the profitability of the nationalised industries, Pearson's correlation coefficients (r) between the extent of use of accounting information in capital expenditure decisions and control (capital expenditure requirements, capital structure, capital expenditure financing and capital expenditure control) and each of the three profitability indexes had been calculated in the Appendix No. VII.

It is evident from the same Appendix that the correlation coefficients between the extent of use of accounting information in all four areas of capital expenditure decisions and control taken/ combined together and each of the three profitability indexes, viz., ROS, ROC and ROI, showed positive linear relationship but these were not significant at .05 level. But the correlation coefficients between the use of accounting information in capital expenditure decisions and control and return on sales, and between the use of accounting information for the same purpose and return on investment were significant at .10 level. The above position indicates that ROS, ROC and ROI were positively related with the use of accounting information in capital expenditure decisions and control. Thus, it can be concluded that overcapitalisation, excessive long-term loans, excessive institutional finance and absence of proper budgetary and treasury control methods affected the profitability of the industries under review.

8.2(b) Working Capital Decisions and Control

There are six variables related with working capital decisions and control viz., working capital requirements decision, inventory decision, accounts receivable decision, cash decision, working capital financing decision and working capital control. These were discussed in detail in Chapter-5. The extent of use of accounting information in these areas and the impact of such use on the profitability had been examined in this section.

(i) Extent of Use:

Six questions (No. 15 to 20 of Appendix VIII in Part-C) were used to measure the extent of use of accounting information in working capital decisions and control. The use of five point Likert scales enabled the scores on the responses of the samples to be summed up. The summation indicated the extent of such use of accounting information and was shown in the Tables 8.6 to 8.11 prepared as per questions 15, 16, 17, 18, 19 and 20 in Part-C of the same Appendix respectively.

It was observed that there was high degree of use of accounting information in working capital requirements decision, inventory decision and working capital financing decision while there was low degree of use of accounting information in accounts receivable decision both at enterprise and corporation levels. On the other hand, there were high and low use of accounting information in cash decision and working capital control at enterprise level and corporation level respectively.

(ii) Impact of Use:

The impact of use of accounting information in working capital decisions and control on the profitability of the selected industries had been measured by the Pearson's correlation coefficients(r) between the extent of use of accounting information in six variables of working capital decisions and control identified earlier and each of the three profitability indexes, viz., ROS, ROC and ROI and the correlation coefficients had been shown in the Appendix No. VII.

If overall position is considered, it is evident from the Appendix that the profitability of the industries under study was positively correlated with the use of accounting information in working capital requirements and cash decisions since all the correlation coefficients in these areas showed positive relationship. Further, the profitability of the industries was not related to the use of accounting information in working capital financing decision since all the correlation coefficients in this area showed negative relationship and none of them was significant even at .10 level. This is because of the fact that the factors considered for the same purpose were more related to non-accounting aspects than accounting aspects. It was also observed from the Appendix that return on capital employed was not related to the use of accounting information in inventory decisions, working capital financing and control areas since the correlation coefficients showed negative positiwn in these cases and none of them was significant even at .10 level. Finally, return on sale and return on investment were not related to the use of accounting information in accounts recevables and working capital financing decisions since they showed negative position (not significant even at .10 level).

The impact of use of accounting information in each of the above six variables of working capital decisions and control on the profitability of the industries had been separately discussed in the present section.

(v) Working Capital Requirements Decision

Working capital is the life-blood of any industrial or commercial enterprise. Its proper decisions and control greatly influence and affect the profitability of an enterprise. Proper decisions and control thereof are inevitable for maintaining the solvency and liquidity of the enterprise in order to continue the business operations smoothly. While discussing the working capital decisions and control vis-a-vis the management use of accounting information therein in Chapter-5, it was pointed out that acute shortage of net working capital, regular and heavy reliance on bank loan for financing the working capital and inadequate use of accounting information for working capital requirements decision were the common problems with almost all the enterprises under the selected nationalised industries. Such common problems and features in turn, hampered the productive operations thus ultimately affecting, to a great extent, the profitability of the enterprises. In particular, the great amount of interest payable for the bank loan in the form of cash credit and bank overdraft taken for meeting and financing the working capital requirements had been a regular drag on the profitability of the industries.

Extent of Use of Accounting Information in Working Capital Requirements Decision:

The following Table 8.6 shows the extent of use of accounting information in deciding working capital requirements or estimates:

Table - 8.6

Responses of the Samples regarding the Extent of Use of Accounting Information in Deciding Working Capital Requirements

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	15 (75)	5 (25)	20 (100)	Chi-square : 0.049
Enterprises	18 (72)	7 (28)	25 (100)	Not significant at .05 level.
Total :	33 (73)	12 (27)	45 (100)	

(Figures in brackets are column-percentages).

It is clear from the above Table that 73 percent of the samples perceived high use while 27 percent of them perceived low use of accounting information in decision of working capital requirements. Of the samples at corporation level, 75 percent and 25 percent perceived high use and low use of accounting information for the same purpose respectively. On the other hand, of the enterprise heads, 72 percent and 28 percent opined high use and low use of accounting information respectively. Then, of the samples who viewed high use, 55 percent and 45 percent belonged to the categories of enterprise heads and corporations' samples respectively and of the samples who viewed low use, 58 percent and 42 percent belonged to the categories of enterprise heads and corporations' samples respectively.

As such, it is evident that there was high degree of use of accounting information in working capital requirements decision both at corporation and enterprise levels. But there was no significant

relationship between the extent of such use and the levels of use (not significant at .05 level). That is, opinion variation as regards the extent of use of accounting information in working capital requirements decision was not dependent on the variations in the levels of use.

Impact of Use:

In order to show the nature of impact of the use of accounting information in deciding working capital requirements on the profitability of the selected nationalised industries, the Pearson's correlation coefficients (r) between the extent of such use and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and shown in Appendix No. VII.

It is evident from the Appendix that the correlation coefficient between the extent of use of accounting information in working capital requirements decision and return on sales, and between the extent of such use and return on investment showed significant positive relationship which implied that both ROS and ROI were highly correlated with the use of accounting information. The use of accounting information in deciding working capital requirements had favourable impacts on the profitability of the industries under study. On the other hand, it has also been observed from the same Appendix that the correlation coefficient between the extent of use of accounting information in deciding working capital requirements and return on capital employed showed positive linear relationship, but there was no significant relationship between them (not significant at .05 level), pointing out that the return on capital employed though correlated, was not

significantly influenced by the use of accounting information in deciding working capital requirements. Thus, it can be concluded from the above situation that shortage of required working capital in most nationalised industries adversely affected the profitability of the industries under review. The same situation was observed earlier in Section 2 of Chapter 5.

(vi) Inventory Decision

One of the important components of working capital is inventory which influences the financial performances of the enterprises and the size of the working capital of the industries to a great extent. As such, it becomes essential to decide and control this component of working capital effectively so as to maintain appropriate liquidity of the enterprises. Because, underinvestment or overinvestment in this current asset leads to difficult problems affecting the very profitability of the industries.

It has been stated in Chapter-5 that the decisions regarding working capital structural components were very poor in the case of all the enterprises under selected nationalised industries. It was seen that there was underinvestment in inventory in these enterprises resulting in frequent production shut-downs, irregularities and failure to deliver and supply the desired goods to customers. Such problems had resulted in an increase of production cost affecting the profitability of the industries to a great extent.

Extent of Use of Accounting Information in Inventory Decision:

The following Table 8.7 shows the responses of the samples regarding the extent of use of accounting information in deciding inventory requirements.

Table - 8.7

Responses of the Samples regarding the Extent of Use of Accounting Information in Inventory Decision

Extent of Use / Levels of Use	High	Low	Total	Level of significance
Corporations	15 (75)	5 (25)	20 (100)	Chi-square: 0.006
Enterprises	19 (76)	6 (24)	25 (100)	Not significant at .05 level
Total :	34 (76)	11 (24)	45 (100)	

(Figures in brackets are column-percentages).

It is evident from the above Table that 76 percent and 24 per cent of the samples perceived high use and low use of accounting information respectively in deciding inventory requirements. Of the samples at corporation level, 75 percent and 25 percent perceived high use and low use of accounting information respectively and on the other hand, of the enterprise heads, 76 percent and 24 percent perceived high use and low use of accounting information for the purpose respectively. Then, of the samples who perceived high use, 56 percent and 44 percent belonged to the categories of enterprise heads and corporations' samples respectively. On the other hand, of the samples who perceived low use, 55 percent and 45 percent

belonged to the categories of enterprise heads and corporations' samples respectively. Thus, there was high use of accounting information in inventory decision both at corporation and enterprise levels. But there was no significant relationship between the extent of use and the levels of use (not significant at .05 level). That is, the opinion variation as regards the extent of use of accounting information in inventory decision was independent of the variations in the levels of such use.

Impact of Use:

In order to exhibit the nature of impact of use or otherwise of accounting information in inventory decision on the profitability of the selected nationalised industries, the Pearson's correlation coefficient (r) between the extent of use of accounting information in inventory decisions and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and shown in the Appendix No. VII.

It is observed from the Appendix No. VII that the correlation coefficient between the extent of use of accounting information in inventory decision and return on sales, and between the extent of such use and return on investment had been positive (not significant at .05 level) signifying that return on sales and return on investment were correlated with the use of accounting information in inventory decision and control. On the other hand, it is also evident from the same Appendix that the correlation coefficients between the use of the accounting information in inventory decision and the return on capital employed showed negative relationship which implied

that use of accounting information in inventory decision had unfavourable impact on the return on capital employed (i.e. profitability). Thus, it can be deduced from the above analysis that there had been overinvestments in the inventory affecting the profitability of the selected industries. It was noted earlier in Section 3(a)(ii) of Chapter 5.

(vii) Accounts Receivable Decision

Another important component of working capital is accounts receivable which also influences to a great extent, the size and requirements of working capital of the industries concerned. So it is imperative to decide and control this important component of working capital effectively with the objective of maintaining optimum liquidity of the nationalised enterprises. It is because overinvestment or underinvestment of accounts receivables produces unfavourable impacts on the financial performances of the industries.

It was observed earlier that accounts receivable decision and control was very weak resulting in over-investment of the same component in these industries causing much financial troubles. However, unsatisfactory control and regulation of accounts receivables as pointed out earlier ultimately led to the increase in the operating costs thus affecting the profitability of the selected industries.

Extent of Use of Accounting Information in Accounts Receivable Decision:

The following Table 8.8 shows the responses of the samples regarding the extent of use of accounting information in accounts receivable decision:

Table - 8.8

Responses of the Samples regarding the Extent of Use of Accounting Information in Accounts Receivable Decision

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	5 (25)	15 (75)	20 (100)	Chi-square: 0.006
Enterprises	6 (24)	19 (76)	25 (100)	Not significant at .05 level
Total :	11 (24)	34 (76)	45 (100)	

(Figures in brackets are column-percentages).

From the above Table it is clear that 76 percent of the samples opined low use while 24 percent of the opined high use of accounting information in accounts receivable decision. Of the samples at corporation levels, 75 percent and 25 percent perceived low use and high use of accounting information respectively and on the other hand, of the enterprise heads, 76 percent and 24 percent perceived low use and high use of accounting information for the same purpose respectively. Then, of the samples who viewed low use, 56 percent belonged to the category of enterprise heads while 44 percent belonged to the category of corporations' samples. On the other hand, of the samples who viewed high use, 55 percent belonged to the category of enterprise heads and 45 percent belonged to the category of corporations' samples.

It is thus evident that there had been low degree of use of accounting information in accounts receivable decision both at corporation and enterprise levels. But there was no significant

relationship between the extent of use and the levels of use (not significant at .05 level). That is, the opinion variation as regards the extent of use of accounting information in accounts receivable decision was independent of variation in the levels of such use.

Impact of Use:

In order to show the impact of use or otherwise of accounting information in accounts receivable decision on the profitability of the enterprises under selected nationalised industries, the Pearson's correlation coefffcients (r) between the extent of use of accounting information in accounts receivable decision and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and shown in the Appendix No. VII.

It is evident from the Appendix that the correlation coefficients between the extent of use of accounting information in accounts receivable decision and return on sales, and between the extent of use of accounting information in accounts receivable decision and return on investment were not significant and showed negative relation signifying that there was over or under investment in the accounts receivable which in turns, affected the profitability of the enterprises under the selected nationalised industries. On the other hand, the correlation coefficient between the extent of use of accounting information in accounts receivable decision and return on capital employed was also not significant but showed positive relationship indicating that the use of accounting information in accounts receivable decision had favourable impact on the profitability of the industries concerned. Thus, it can be deduced that the above situation led to

adoption of defective credit and collection policies which affected adversely the profitability of the industries under study. The same position was identified earlier in Section 3(b) of Chapter 5.

(viii) Cash Decision

The efficient cash decision would synchronize the cash receipts with cash outlay for meeting the operating requirements. Such decision is mainly based on the normal and abnormal requirements of the enterprises. Many other factors covering both accounting and non-accounting information (as pointed out earlier in Section 3 of Chapter 5) are considered and effectiveness of such decision might affect the very profitability of the industries under study.

Extent of Use of Accounting Information in Cash Decision:

The following Table 8.9 shows the responses of the samples regarding the degree of use of accounting information in cash decision:

Table - 8.9

Responses of the Samples regarding the Extent of Use of Accounting Information in Cash Decision

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	7 (35)	13 (65)	20 (100)	Chi-square: 4.87
Enterprises	17 (68)	8 (32)	25 (100)	Significant at .05 level
Total :	24 (53)	21 (47)	45 (100)	

(Figures in brackets are column-percentages).

It is clear from the Table that 53 percent and 47 percent of the samples viewed high use and low use of accounting information in cash decision respectively. Of the samples at corporation level, 65 percent and 35 percent viewed low use and high use of accounting information respectively and on the other hand, of the enterprise heads, 68 percent and 32 percent opined high use and low use of accounting information for the purpose respectively. Then, of the samples who viewed high use, 71 percent and 29 percent belonged to the categories of enterprise heads and corporations' samples respectively. On the other hand, of the samples who perceived low use, 62 percent and 38 percent belonged to the categories of corporations' samples and enterprise heads respectively.

It is thus evident that there were both high and low use of accounting information in cash decision at the enterprise level and the corporation level respectively. As such, there was significant relationship between the extent of use and the levels of use (significant at .05 level). That is, the opinion variation as regards the extent of use of accounting information in cash decision was not independent of the variations at the levels of such use. Variation in use may be due to low importance attached to cash decision at corporation level.

Impact of Use:

In order to exhibit the nature of the impact of the use of accounting information in cash decision on the profitability of the selected industries, the Pearson's correlation coefficients (r) between the extent of use of accounting information in cash decision and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and presented in the Appendix No. VII.

The major issue as evident from the Appendix was that the correelation coefficients between the extent of use of accounting information in cash decision and each of the three profitability indexes viz., ROS, ROC and ROI showed positive linear relationships which implied that ROS, ROC and ROI, were positively correlated with the use of accounting information in cash decision. However, there was no significant relationship between the use of accounting information for the said purpose and the overall profitability (not significant at .05 level). Thus, it can be concluded that the use of accounting information in cash decision had favourable effects on the profitability of the industries. But shortage of adequate amount of cash required for running the business operations adversely affected the profitability of the industries under study. The same situation was observed earlier in Section 3(c) of Chapter 5.

(ix) Working Capital Financing Decision

Decision to procure adequate and necessary finance to meet working capital requirements is also based on consideration of many accounting and non-accounting factors. The various sources of finance and effectiveness or otherwise of such decision might affect the profitability of the enterprises.

Extent of Use of Accounting Information in Working Capital Financing Decision:

The following Table 8.10 shows the responses of the samples with respect to the degree of use of accounting information in working capital financing decision:

Table - 8.10

Responses of the Samples regarding the Extent of Use of Accounting Information in Working Capital Financing Decision

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	15 (75)	5 (25)	20 (100)	Chi-square: 0.266
Enterprises	17 (68)	8 (32)	25 (100)	Not significant at .05 level
Total :	32 (71)	13 (29)	45 (100)	

(Figures in brackets are column-percentages).

It is evident from the above Table that 71 percent and 29 per cent of the samples perceived high use and low use of accounting information in working capital financing decision respectively. Of the samples at corporation level, 75 percent and 25 percent perceived high use and low use respectively and on the other hand, of the enterprise heads, 68 percent and 32 percent perceived high use and low use of accounting information in such decision respectively. Then, of the samples also perceived high use, 35 percent and 47 percent belonged to the categories of enterprise heads and corporations' samples. On the other hand, of the samples who perceived low use, 62 percent and 38 percent belonged to the categories of enterprise heads and corporations' samples respectively.

Thus, it is clear that there had been high use of accounting information in working capital financing decision both at corporation and enterprise levels. But there was no significant relation-

ship between the extent of use and the levels of use (not significant at .05 level). That is, opinion variations as regards the extent of use of accounting information in working capital financing decision was independent of the variations in the levels of such use.

Impact of Use:

The nature of impact of use of accounting information in working capital financing decision on the profitability of the nationalised industries can be measured by the Pearson's correlation coefficients (r) which pinpoint the relation between the extent of such use and profitability indexes. In order to show such impact, the correlation coefficients between the extent of use of accounting information in working capital financing decision and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and exhibited in the Appendix No. VII.

It is evident from the same Appendix that all the correlation coefficients between the extent of use of accounting information for the same purpose and each of the three profitability indexes viz., ROS, ROC and ROI showed negative relationship indicating the fact that ROS, ROC and ROI were not directly related to the use of accounting information in working capital financing decision (not significant even at .20 level). Thus, it can be deduced that there had been excessive short-term institutional loans in the nationalised industries affecting adversely the profitability of the industries under study. The sample position was pointed out in Section 4 of Chapter 5.

(x) Working Capital Control

In order to maintain adequate working capital for running the operations of the enterprises, proper working capital control with regard to its requirements, various components and sources of finance might explore the variations between budgeted and actuals with reasons of both accounting and non-accounting factors responsible for such variance. However, absence of any appropriate cost control programme, great reliance on borrowed capital as a source of finance, ineffective inventory, accounts receivable and cash decisions might affect the profitability of the industries under study.

Extent of Use of Accounting Information in Working Capital Control:

The following Table 8.11 shows the responses of the samples regarding the degree of use of accounting information in working capital control:

Table - 8.11

Responses of the Samples as regards the Extent of Use of Accounting Information in Working Capital Control

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	7 (35)	13 (65)	20 (100)	Chi-square: 3.730
Enterprises	16 (64)	9 (36)	25 (100)	Significant at .05 level
Total :	23 (51)	22 (49)	45 (100)	

(Figures in brackets are column-percentages).

The Table exhibits that 51 percent and 49 percent of the samples felt high use and low use of accounting information in working capital control respectively. Of the samples at corporation level, 65 per cent and 35 percent viewed low use and high use respectively and on the other hand, of the enterprise heads, 64 percent and 36 percent viewed high use and low use of accounting information in working capital control respectively. Then, of the samples who viewed high use, 70 percent and 30 percent belonged to the categories of enterprise heads and corporations' samples respectively. On the other hand, of the samples who viewed low use, 59 percent and 41 percent belonged to the categories of corporations' samples and enterprise head respectively.

It is thus evident that there were both high and low degree of use of accounting information in working capital control at enterprise and corporation levels respectively. However, the relationship between the extent of use and the levels of use was significant at .05 level. That is, the opinion variations as regards the extent of use of accounting information in working capital control was not independent of the variations in the levels of such use.

Impact of Use:

In order to show the impact of use of accounting information in working capital control on the profitability of the nationalised industries, the Pearson's correlation coefficient (r) between the extent of use of accounting information in working capital control and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and presented in the Appendix No. VII.

It is evident from the same Appendix that the correlation coefficients between the use of accounting information for the same purpose and return on sales, and between the use of accounting information for the said purpose and return on investment showed positive linear relationship (but not significant even at .20 level), signifying that use of accounting information in working capital control had limited favourable effects on profitability of the industry. On the other hand, correlation coefficients between the use of accounting information in working capital control and the returns on capital employed showed negative relationship signifying that the use of accounting information for the said purpose had unfavourable effects on profitability of the industries concerned. Thus, it can be said that there had been absence of proper budgeting resulting in shortage of adequate working capital in the nationalised industries affecting adversely the very profitability of the industries under study. This position was observed in Section 5 of Chapter 5.

Combined Impact of Use:

To show the impact of the use of accounting information in working capital decisions and control as a whole on the profitability of the nationalised industries, the Pearson's correlation coefficient (r) between the extent of use of accounting information in working capital decisions and control (i.e. working capital requirements, inventory, accounts receivables, cash, working capital financing and control) and each of the three profitability indexes had been calculated and shown in the Appendix No. VII.

From the same Appendix it is evident that the correlation coefficients between the extent of use of accounting information in six variables of working capital decisions and control taken together and return on sales, and between the extent of use of accounting information in six areas of working capital decisions and control taken combinedly and return on investment showed positive linear relationship (significant at .20 level) signifying that the return on sales and return on investment were correlated with the use of accounting information in working capital decisions and control. On the other hand, the correlation coefficients between the extent of use of accounting information in six areas of working capital decisions and control taken combinedly and return on capital employed showed negative correlation pointing out the fact that the return on capital employed was not related to the use of accounting information in working capital decisions and control. Therefore, it can be deduced that shortage of required working capital, over-investment in inventory, unsound credit and collection policies, inadequate cash, excessive shortterm finance and absence of proper control methods for working capital - all these affected the profitability of the industries under study.

8.2(c) Profit Decisions and Control

There are four variables related with profit decisions and control viz., selling price decision and sales target, cost of production decision, operating expenses decision and profit target. These were discussed in detail in Chapter 6. The extent of use of accounting information in these areas and the impact of such use on the profitability had been examined in this section.

(1) Extent of Use:

Four questions (No. 14 to 17 of Appendix VIII in Part-D) were used to measure the extent of use of accounting information in profit decisions and control. The use of Likert's five point scales enabled the scores on the responses of the questions to be summed up. The summation which indicated the degree of such management use was shown in the Tables 8.12 to 8.15 prepared as per questions 14, 15, 16 and 17 in Part-D of the same Appendix respectively.

It was observed that there was high use of accounting information in deciding selling price and sales target, cost of production decision, operating expenses or overheads decision and in deciding profit targets both at enterprise and corporation levels.

(ii) Impact of Use:

The impact of use of accounting information in profit decisions on the profitability of the selected industries had been measured by the Pearson's correlation coefficients (r). The correlation coefficients between the extent of use of accounting information in four areas of profit decisions and control, viz., deciding sale price and sale target, cost of production, operating overheads and profit targets and each of the three profitability indexes, viz., ROS, ROC and ROI had been shown in the Appendix No. VII.

If the overall position is taken into account it becomes evident that profitability of the industries was related to the use of accounting information in deciding cost of production, operating overheads and profit targets. The correlation coefficients showed positive linear relationships between them, while overall profita-

bility of the industries was not related to the use of accounting information in deciding sale price and sale target because the correlation coefficient showed the negative position in this area (not significant even at .10 level).

The impact of use of accounting information in each of the above four variables of profit decisions and control on the profitability of the industries under study had been separately discussed in the present section.

(xi) Sales Target and Selling Price Decision

The profitability of an enterprises is influenced by the selling price and sales target decision programme which is directly related to the costs and sales revenue of the finished products which are affected by a number of factors influencing the system and practice of pricing the product. As such, defective selling price and sales target decision might greatly affect the profitability of the enterprise.

The authorities responsible for deciding the prices of the products of the nationalised industries did not properly consider accounting information with regard to the manufacturing and production cost, and thus prices so fixed appeared to be, in most cases, uneconomical for the enterprises because these prices did not represent the actual cost of the production instead enabled the enterprises only to reach break-even point i.e. at no profit no loss stage. The concerned authorities while fixing up the prices of product also did not give due consideration to the decided performance evaluation criterion i.e. profitability. Consequently, such pricing methods

did not represent the contribution of all the factors of production at above the break-even point thus having unfavourable impact on the profitability of the identified industries.

Extent of Use of Accounting Information in Deciding Sales Targets and Selling Price:

The following Table 8.12 shows the responses of the samples regarding the extent of use of accounting information in deciding sales targets and selling price:

Table - 8.12

Responses of the Samples regarding the Extent of Use of Accounting Information in Deciding Sales Targets and Selling Price

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	15 (75)	5 ((25)	20 (100)	Chi-square: 0.049
Enterprises	18 (72)	7 (28)	25 (100)	Not significant at .05 level
Total :	33 (73)	12 (27)	45 (100)	

(Figures in brackets are column-percentages).

The above Table 8.13 exhibits that 73 percent of the samples perceived high use while 27 percent of them perceived low use of accounting information in deciding sales targets and selling price. Of the samples at corporation level, 75 percent viewed high use while 25 percent viewed low use of accounting information for above purpose. On the other hand, of the enterprise heads, 72 percent

viewed high use while 28 percent of them viewed low use of accounting information for the said purpose. Then, of the samples who viewed high use, 55 percent and 45 percent belonged to the categories of enterprise head, and corporations' samples respectively. On the other hand, of the samples who viewed low use, 58 percent and 42 per cent belonged to the categories of enterprise heads and corporations' samples respectively.

Thus, it is evident that there was high use of accounting information in deciding sales targets and selling price both at corporation and enterprise levels. But there was no significant relationship between the extent of use and the levels of use (not significant at .05 level). That is, the opinion variations as regards the extent of use of accounting information in deciding sales targets and selling price was independent of the variations in the levels of such use.

Impact of Use:

The nature of impact of the use of accounting information in deciding sale price and sales targets on the profitability of the nationalised industries can be measured by the Pearson's correlation coefficients (r) between the extent of such use and profitability indexes. In order to show such impact, the correlation coefficients between the extent of use of accounting information in deciding sale price and sales target and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and shown in the Appendix No. VII.

The major issue as evident from the same Appendix that all the correlation coefficients between the extent of use of accounting information in sale price and sales target and each of the three profitability indexes, viz. ROS, ROC and ROI showed negative relationship (not significant even at .20 level) indicating that ROS, ROC and ROI were not directly correlated with the use of accounting information in deciding sale price and sales target in the nationalised industries. Thus, it can be concluded that uneconomical or defective sale targets and sale price decision (wherein cost of production remained unrepresented) in the selected industries affected the very profitability of the concerns under study. The same situation was observed earlier in Section 4a(i) & (ii) of Chapter 6.

(xii) Cost of Production Decision

Profitability is also directly affected by the production cost efficiency or inefficiency which influences the earning power of the enterprises as well as purchasing power of the customers ultimately bringing in very poor/profit margin left for the industries. Thus, high cost or low cost of products would have unfavourable or favourable impact on the profitability of the industries.

Extent of Use of Accounting Information in Deciding Cost of Production:

The following Table 8.13 exhibits the responses of the samples as regards the extent of use of accounting information in deciding cost of production:

Table 8.13

Responses of the Samples regarding the Extent of Use of Accounting Information in Deciding Cost of Production

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	12 (60)	8 (40)	20 (100)	Chi-square: 1.330
Enterprises	19 (76)	6 (24)	25 (100)	Not significant at .05 level
Total :	31 (69)	14 (31)	45 (100)	

(Figures in brackets are column-percentages).

It is clear from the above Table that 69 percent and 31 percent of the samples opined high use and low use of accounting information in cost of production decision respectively. Of the samples at corporation level, 60 percent opined high use while 40 percent opined low use of accounting information for the above purpose. On the other hand, of the enterprise heads, 76 percent opined high use while 24 percent opined low use of accounting information for the said decision. Then, of the samples who viewed high use, 61 percent belonged to the categories of enterprise heads and corporations' samples respectively. On the other hand, of the samples who viewed low use, 57 percent and 43 percent, belonged to the categories of the corporations' samples and enterprise heads respectively.

It is thus evident that there was high degree of use of accounting information in cost of production decision both at enterprise and corporation levels. However, there was no significant relationship in the extent of use and the levels of use (not significant at

.05 level). That is, the opinion variations as regards the extent of use of accounting information in cost of production decision was independent of the variations in the levels of such use. Such decision being vital for use of accounting information is high both at corporation and enterprise levels.

Impact of Use:

In order to show the impact of use of accounting information in deciding the cost of production on the profitability of the selected industries, Pearson's correlation coefficients (r) between the extent of use of accounting information in deciding the cost of production and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and presented in the Appendix No. VII.

The major issue as evident from Appendix VII was that the correlation coefficients between the extent of use of accounting information for the above purpose and ROS showed significant positive relationship (significant at .05 level) indicating that the return on sales was directly correlated with the use of accounting information in deciding the cost of production. On the other hand, the correlation coefficients between the extent of use of accounting information in deciding cost of production and ROI and between the extent of use of accounting information for the same purpose and ROC showed positive linear relationship, (but not significant at .05 level) pointing out that ROC and ROI were positively correlated with the use of accounting information in deciding cost of production. Therefore, it can be concluded that the profitability of the industries was greatly affected by the prevailing high cost of production

which was fixed in major cases without proper consideration of accounting information. The same situation was observed earlier in 4(b) of Chapter 6.

(xiii) Operating Expenses Decision:

The estimate of future operating expenses or overheads to be incurred for conducting a business is an important managerial decision-making function. The estimates of office and administration, and selling and distribution expenses were made taking into consideration the past related accounting data as well as present and future trends. The effectiveness of such decision might also affect the profitability of the industries to a great extent.

Extent of Use of Accounting Information in Decision regarding Operating Expenses:

The following Table 8.14 exhibits the responses of the samples as regards the extent of use of accounting information in operating overheads or expenses decision:

Table - 8.14

Responses of the Samples regarding the Extent of Use of Accounting Information in Operating Expenses Decision

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	15 (75)	5 (25)	20 (100)	Chi-square: 0.163
Enterprises	20 (80)	5 (20)	25 (100)	Not significant at .05 level
Total :	35 (78)	10 (22)	45 (100)	

(Figures in brackets are column-percentages).

It is observed from the above Table that 78 percent of the samples perceived high use while 22 percent of them perceived low use of accounting information in operating expenses decision. Of the samples at the corporation level, 75 percent perceived high use while 25 percent perceived low use of accounting information for the above purpose. On the other hand, of the enterprise heads, 80 percent viewed high use while 20 percent viewed low use of accounting information for the same decision. Then, of the samples who perceived high use, 57 percent belonged to the category of enterprise heads while 43 percent belonged to the category of corporations' samples. On the other hand, of the samples who viewed low use, 50 percent belonged to the category of corporations' samples while another 50 percent belonged to the category of enterprise heads.

It is thus evident from the opinion of the samples that there was high use of accounting information in operating expenses decision both at corporation and enterprise levels. But there seemed to be no significant relationship between the extent of use and the levels of use of accounting information (not significant at .05 level). That is, the opinion variation as regards the extent of use of accounting information in operating expenses decision was independent of the variations in the levels of such use.

Impact of Use:

The nature of impact of use or otherwise of the accounting information in deciding operating expenses on the profitability of the industries under study can be measured statistically by the Pearson's correlation coefficients (r) between the extent of such

use of accounting information and the profitability indexes. To show such impact, the correlation coefficients between the extent of use of accounting information and each of the three profitability indexes, viz., ROS, ROC and ROI had been duly calculated and shown in the Appendix No. VII.

It is evident from the same Appendix that all the correlation coefficients between the extent of use of accounting information in operating overheads decision and each of the three profitability indexes, viz., ROS, ROC and ROI showed positive and linear relationship (but not significant at .05 level) signifying that the use of accounting information in operating overheads decision had favourable effects on the same profitability indexes. Therefore, it can be concluded that the higher operating expenses affected adversely the profitability of the industries under study. The same position was observed earlier in Section 4(c) of Chapter 6.

(xiv) Profit Targets Decision

Profitability is also influenced by profit targets decision which is an important tool for formulating policies by management. Improper and defective decisions as regards the size of profit might greatly affect the profitability of the enterprises.

Factors considered in deciding the profit targets covered both accounting and non-accounting dimension. But in the nationalised industries, various budgeting forms and techniques were used to follow the traditional pattern which failed to conform to the requirements and provisions of budgetary control on the understanding that standard costing and proper variance analysis were not practised by the

industries under study. It was because of these drawbacks and lackings in the budgeting practice that negative variances between the budget estimates and actual costs of production had arisen thereby increasing the total operating costs which had in return, affected the profitability of the concerns.

Extent of Use of Accounting Information in Deciding Profit Targets (or Size of Profit):

The following Table 8.15 exhibits the responses of the samples as regards the degree of use of accounting information in deciding profit targets or size of profit of the selected nationalised industrial enterprises:

Table - 8.15

Responses of the Samples regarding the Extent of Use of Accounting Information in Deciding Profit Targets

Levels of Use \ Extent of Use	High	Low	Total	Level of significance
Corporations	11 (55)	9 (45)	20 (100)	Chi-square: 0.004
Enterprises	14 (56)	11 (44)	25 (100)	Not significant at .05 level
Total :	25 (56)	22 (44)	45 (100)	

(Figures in brackets are column-percentages).

It is evident from the above Table that 56 percent and 44 percent of the samples viewed high use and low use of accounting information in deciding profit targets or size of profit. Of the samples at corporation level, 55 percent viewed high use while 45 percent

viewed low use and on the other hand, of the enterprise heads, 56 percent viewed high use while 44 percent viewed low use of accounting information for the above purpose. Then, of the samples who viewed high use, 56 percent belonged to the category of enterprise heads while 44 percent belonged to the category of corporations' samples. On the other hand, of the samples who opined low use,55 percent and 45 percent belonged to the categories of enterprise heads and corporations' samples respectively.

It is thus clear from the opinion of the samples that there was high use of accounting information in deciding profit targets or size of profits both at corporation and enterprise levels.

But there seemed to be no significant relationship between the extent of use of accounting information and the levels of use (not significant at .05 level). That is, the opinion variation as regards the extent of use of accounting informations in deciding profit targets or size of profit was independent of the variations in the levels of use.

Impact of Use:

In order to show the nature of impact of use of accounting information in deciding profit targets on the profitability of the industries under review, the Pearson's correlation coefficients (r) between the extent of use of accounting information in profit targets and each of the three profitability indexes, viz., ROS, ROC and ROI had been calculated and presented in the Appendix No. VII.

It is evident from the same Appendix that the correlation coefficients between the extent of use of accounting information in deciding profit targets and return on sales, and between the use of accounting information for profit targets and return on investment showed significant positive relationship (significant at .05 level) pointing out that ROS and ROI were highly correlated with the use of accounting information in deciding profit targets. On the other hand, the correlation coefficients between the extent of use of accounting information in profit target and return on capital employed also showed positive linear relationship (but not significant at .05 level) signifying that ROC was also positively correlated with the use of accounting information in fixing profit targets. Therefore, it can be deduced that improper and defective profit target decisions without due consideration of accounting information greatly affected the profitability of the industries under study. The same position was observed in Section 4(d) of Chapter 6.

Combined Impact of Use:

In order to show the impact of use or otherwise of accounting information in profit decisions and control as a whole on the profitability of the nationalised industries, the Pearson's correlation coefficient (r) between the extent of use of accounting information in profit decisions and control, and the profitability indexes had been calculated in the Appendix No. VII.

It is clear from the same Appendix that the correlation coefficients between the use of accounting information in all four areas of profit decisions (viz., sale target and sale price decision, cost

of production decision, operating overhead decision and profit target decision) taken combined and the return on sale, and between the extent of use of accounting information in four areas of profit decisions taken combined and return on investment showed significant positive relationship (significant at .05 level) indicating that ROS and ROI were highly correlated with the use of accounting information in profit decisions. On the other hand, the correlation coefficients between the extent of use of accounting information in four areas of profit decisions taken combined and return on capital employed showed positive linear relationship (but not significant at .05 level) signifying that ROC was positively correlated with the use of accounting information in profit decisions. Therefore, it can be said that uneconomic sales target and selling price decision, higher cost of production, excessive operating overheads and defective profit targets affected adversely the profitability of the industries under study.

Overall Impact of Use of Accounting Information in Financial Decisions and Control on Profitability:

Finally, the nature of overall impacts of the use of accounting information in financial decisions and control on the profitability of the industries under study had been investigated by the Pearson's correlation coefficients between the extent of use of accounting information in financial decisions and control and the profitability indexes which had been shown in Appendix No. VII.

In total, 42 (forty two) correlation coefficients were calculated between the extent of use of accounting information in three areas of financial decisions and control (viz., capital expenditure, working capital, and profit decisions and control) and each of the three profitability indexes (viz., ROS, ROC and ROI) of the industries concerned. Among them, 31 (thirty one) values of correlation coefficients were positive while 11 (eleven) were negative. Seven positive values of correlation coefficients were significant at .10 level wherein 5 (five) values were significant at .05 level and none of the negative values was significant at .10 level. It is evident that there was positive relationship between the use of accounting information in financial decisions and control and the profitability measures. In fine, it is concluded that the use of accounting information in financial decisions and control had positive impact on the profitability of the nationalised industries under study.

CHAPTER - 9

CONCLUDING FRAMEWORK

9.1 Summary of the Findings:

Accounting is a system which generates and supplies information and data to be used as inputs for managerial decisions and control purposes. The present day accounting system provides information on every sort of activity of the business for the said purpose. In an economic entity, accounting performs two important services for management — it acts as the best possible information system and it offers professional advice to management in its decision-making and control functions. Its importance as the inputs or bases for managerial decisions and control purposes has been widely recognized in developed countries. But the present economic orientation of accounting seems to have neglected the role of accounting as an information system for decision-making.

Accounting information, in this study, denotes all data and information presented through financial statements, viz., Balance Sheet, Profit and Loss Account or Income Statement, and Fund Flow Statement. Over and above, information generated through financial markets, Government statistics, economists, financial intermediaries and analysts are treated as non-accounting information to be also used as inputs side by side with accounting information, in particular, for capital expenditure decisions and control. It was observed that attempts to use both accounting and non-accounting information for management decisions were of recent phenomenon and these pioneering effeorts were helpful to stimulate increasing interests in the subject.

It has been pointed out by the researchers that accounting information was not adequately reflected in management decisions and control functions in developing countries. In many situations accounting information does not form the basis for management decisions and control in which cases other inputs or bases of decisions, such as, past experiences, hunches, guess work, intuition, chances, etc., were taken into account for the purpose. Inadequate or low use of accounting information by management for the said purposes may be one of the important variables too for dismal financial performances of the Bangladesh nationalised industries which have got specific goals and objectives. Management at corporation and enterprise levels was responsible for realising the objectives effectively. But management policy for proper preparation and evaluation of financial statements and other reports to be used as accounting information for financial decisions and control and their feedback at all stages, seems to have not been practised despite the fact that such information plays vital role in management decisions in both private and public sector industries.

There have been few writings dealing in particular, with the behavioural aspect of the use of accounting information in correlation with general organisational structure, managerial traits and leadership style. But there has so far been little study of the use of accounting information in management's financial decisions and control of the nationalised industries in Bangladesh. Therefore, the existing practice and extent of use of accounting information in financial decisions and the impact of presence or otherwise of such use of accounting information on the financial performances as seen through profitability had been undertaken as the main objectives of the present study.

The study investigated into the stages of industrial development upto nationalisation, management pattern and accounting system with its appropriateness or otherwise for decision making and control purpose and attempted to identify the practice and extent of use of such accounting information in financial decisions. It sought to explore the use of both accounting and non-accounting information at corporation and enterprise levels in capital expenditure decisions and control, working capital decisions and control, and profit and price decisions and control. The study also examined the existing financial reporting and management information system pointing out its deficiencies and weaknesses in the context of use of such information in management decisions and control functions. The study also had brought to light certain problems which hindered the use by management of accounting information in financial decisions of the selected industries in Bangladesh. Finally it further attempted to bring into light the extent of use as well as the impact of such use or otherwise on the financial performances of the industries concerned.

A brief review of industrial development in Chapter-3 reveals that the role of public sector or nationalised industries in the industrial development of the country has greatly increased and the whole pattern of industrial ownership and policy has undergone radical change since the promulgation of the Bangladesh Industrial Enterprises (Nationalization) Order, 1972. Then the analysis of management pattern of the nationalised industries indicates that the powers and the responsibilities of the three-tier system of industrial management have not been clearly delineated, management at corporation and enterprise levels does not enjoy adequate authority and freedom for running the operations of the industries on commercial lines and for making

decisions on various aspects and control thereof, and appropriate criteria for performance measurements have not been developed thus pointing out that there is a great scope to improve quality of operations and management decisions at all levels.

In the review of accounting system in the nationalised industries, it is found that the accounting system that was practised during the pre-liberation period in the industries set-up by the former East Pakistan Industrial Development Corporation had been adopted later on by the nationalised industries including integrated accounting practice. The present accounting system does not involve any responsibility accounting and is viewed more as the system for recording and reporting the business operations than as an information system for decision making. The present reporting system too has not been developed and monitored for decision-making and control purposes and the enterprise management seems to receive scanty feedback on the financial statements and reports.

As observed in Chapter 4, capital expenditure for the purpose of the present study included expenditure with regard to new projects, balancing, modernisation and replacement (BMR) and expansion programme. Capital expenditure decisions underwent three important stages, viz., formulation, evaluation and implementation. At formulation stage, preparation of long-term forecasts, compilation of cash forecasts and annual capital budget were required. It further required project profile, project description, cost estimates, financing, benefits, manpower requirements, work schedule and project analysis. Then the various techniques applied for project evaluation stage were: internal rate of return, return on investment, pay back method, return on capital employed, benefit-cost ratio analysis, net present

value method and situational-benefit analysis which are all related with accounting information. The use of accounting information at these stages was insufficient due to the following problems: procedural complexities at implementation stage, delay in procuring and non-availability of lined up credit, lack of basic and required data and information from existing as well as similar types of enterprises, delay in collecting such information, lack of skilled-hands in preparation and evaluation stages, rapid changes of economic factors including frequent price fluctuations both at home and abroad, limitations of market for finished products, financial problems in choosing alteratives, complexities in purchase formalities and machinery imports, limitations of approved budgets, inaccuracy of information and data received for the purpose, etc.

As observed in Section 3 of Chapter 4, capital expenditure decision areas included capital expenditure requirements, capital structure and capital expenditure financing decision wherein the use of accounting and non-accounting information had been extensively examined. Element-wise capital expenditure requirements and allocation thereof were determined on the basis of actual cost of similar projects, local market rates, economic trends, and departmental rough estimates in case of the pre-construction and the construction expenditure items, while international market situations, international informal inquiry, etc., were considered in case of the imported machinery and equipments items. As such, there had been more use of non-accounting data than accounting ones in decisions for capital expenditure requirements and allocations of such capital expenditure items in the selected industries.

Various factors like actual cost of similar projects, local and international market situations, departmental rough estimates, assumptions, etc., were also considered for deciding the capital expenditure requirements of 14 new projects established during the Bangladesh period, 1972-1982. Of them non-accounting information, viz., international market situations, and enquiries, departmental rough estimates, assumptions, fixed averages, etc. had been more used than accounting information, viz., actual cost of similar and existing projects for the above purposes. Besides the above factors, various other related factors as opined by the respondents were also considered for capital expenditure requirements decisions. These were future profitability, social consideration, financial and economic viability, cost of acquiring land and land development, building, machinery, etc., cost-benefit ratio analysis, technical viability, availability of foreign and local funds, existing and similar enterprises' financial reports, marketability of products, changes in foreign exchange rates, cost of trial production, etc.

Original capital expenditure requirements were revised due to various reasons which were stated as: price escalation abroad, inflation at home market, lack of skilled-hands at implementation stage, lack of foreign lined-up credit, delay in approval of the proposed projects, devaluation of Bangladesh currency and revaluation of foreign exchange rates, and delay in shipment of plant and machineries by the foreign suppliers. Of them, non-accounting factors outweighed the accounting factors.

As observed in Chapter 4.3(b), various influencing factors were considered in making capital structure decision and these were :

nature and requirements of an individual enterprise, relative costs, relative risks, relative returns and availability of funds. The Controller of Capital Issues had prescribed 50:50 debt—equity ratio as the capital structure for the industrial enterprises under the selected industries in Bangladesh. The equity-debt ratio, on an average, of the enterprises during the period of their establishment, 1951-52 to 1971-72 and 1972-73 to 1981-82, were 47:53 and 44:56 respectively showing more reliance on debt capital in the post-liberation period. There was highly disproportionate ratio in capital structure of the industries during their operating period, viz., 18:82 for Jute, 26:74 for Cotton, 36:64 for Sugar and Food, 16:84 for Steel and Engineering and 23:77 for Chemical. This resulted in a very high rate of debt capital with big amount of interest thereon thus affecting the very profitability of the industries.

As seen in Chapter 4.3(c), an analysis of the capital expenditure financing decision indicates that almost 90 percent of foreign currency was financed by institutional debt capital requiring more Government equity capital to finance capital expenditure of the projects. The same analysis also exhibits great importance of local currency in the industrial development of the country and it was evident that 86 per cent of the actual local currency was supplied by Government debt capital. All industries under study except Cotton Textile used more debt capital than equity capital and switched over from equity capital to debt capital to finance the capital expenditure or gross fixed assets during the operating period. The decision of such financing pattern might have adverse effects on the profitability of the industries by the large amount of interest charges paid for the borrowed capital.

As observed in Section 4 of Chapter 4, certain forms were used for effective capital expenditure control and these were: cost-sheet detailing the phase-wise expenditure, progress report about the phase wise implementation, authorization form to incur the expenses for different items and post-audit reports. Then the control methods include both the treasury control and budgetary control measures. Treasury control methods were not adequate for the purpose because there was no provision for conducting post-audit of capital expenditure and the progress report on capital expenditure did not show proper analysis of the various items of actual costs. On the other hand, the budgetary control provisions were also defective in the sense that capital budgeting served only treasury requirements which gave more emphasis on the propriety and authenticity of such financial transactions rather than served as a tool of managerial control. The result was that it showed the increase of actual costs over original and revised capital expenditure requirements, thus necessitating revision of original estimates in which case various factual bases or determinants were taken into account among whom price-escalation at home and abroad, devaluation of Bangladesh currency, higher interest rates on foreign debt, etc., might be worthmentioning. The bases or reasons stated above were related more or less with non-accounting information. The extent of use of non-accounting information or factors instead of accounting information or factors was very high regarding decisions for revision of original capital expenditure requirements and for making comparative study of the actual costs with the original and the revised capital expenditure requirements as a matter of budgetary control in the selected industries.

In the operating period, the emphasis is on the maintenance of an adequate level of liquidity and the minimization of the cost of short-term funds through working capital. During this period, various aspects of working capital decisions and control which include determination of short-term objectives and policies, working capital requirements, working capital structural components, working capital financing and its control were undertaken.

As observed in Chapter 5, the short-term objectives of the industries under study were generating profits, minimizing cost of short-term funds, maintenance of liquidity, financing of working capital requirements and full capacity utilization and it appears that the same financial objectives were mostly related with accounting dimensions. Further, the short-term policies were optimum size of working capital, sources of finance for working capital, sound credit and collection policies, proper inventory decisions, sound cash decision and employment of retained earnings for capacity expansion and it appears that the same short-term financial policies were mostly related with non-accounting information than with accounting information.

As observed in Chapter 5, the study reveals that the working capital decisions and control were not effective due to various reasons. Firstly, both accounting and non-accounting factors were considered for deciding working capital requirements. The factors were identified in Chapter 5.2 and a close look into the same factors reveals that the estimate of working capital requirements was mainly based on intuition and hunches of the planners, instead of factual data. Further, it was observed that there was relatively less use of long-term funds or share-

holders equity in the industries. Low ratio indicates the poor liquidity position of the industries i.e. the size of working capital was not sufficient enough in the selected industries.

Secondly, inventory decision seems to be poor in most of the industries. Various determinants were taken into consideration for deciding optimum size of inventory which were: lead time, capacity utilization, price of raw materials, storage facilities, cost of carrying inventory, degree of obsolescences, etc. Thus both accounting and non-accounting information or factors were considered of which non-accounting information or factors got prominance over the accounting ones. Different methods were applied for testing the adequacy or otherwise of the size of inventory and the methods were number of months' value of production, inventory turnover ratio, safety stock technique, optimum inventory or economic order quantity, quick ratio, interest earned ratio, etc. It appears that the methods used for testing the adequacy of the size of inventory were based mostly on non-accounting information. An analysis of the above methods signifies that due to more use of non-accounting information there had been underinvestment in the inventories hampering the normal production as well as the supply of finished products to satisfy the customers' requirements. It ultimately affected the profitability of the industries. The enterprises did not apply modern techniques of inventory decision and control due to non-availability of qualified and professionally trained financial managers and executives, efficient organization and conducive management climate. Further, poor stores management was also another reason for underinvestment of inventory in the selected industries.

Thirdly, credit and collection policies significantly influenced the working capital requirements. Accounts receivable policy appeared to be unsound in most of the enterprises under selected industries because the amount of closing accounts receivables held by them was highly excessive if considered both in terms of absolute figures and average collection period. The main reasons for such position were stated to be liberal credit sales, unsound collection policy, poor decision for credit terms, credit risks and cash discount. As observed in Sub-Section (b) in Section 3 of Chapter 5, certain factors were considered for deciding the size of accounts receivables which were credit terms or policy, collection period, cash discount, selection of credit risks, etc. Factors considered here covered more non-accounting information than accounting information. Further, accounts receivables turnover and average collection period methods were applied for testing the adequacy or otherwise of the accounts receivables and these methods were based mostly on accounting information than on non-accounting information.

Fourthly, cash decision, another important element of working capital, involves the formulation of cash policies and procedures based on normal and abnormal requirements of the enterprise. Cash decision seemed to be poor in most of the enterprises under selected industries in the sense that closing cash and bank balance as held by the enterprises were insufficient and much lower than the budget estimates. Various reaons responsible for this position were: inaccurate cash forecasting, unsound cash receipt and disbursement policies and poor credit and collection policy. Various factors were taken into account for deciding the cash requirements in the enterprises

under selected industries and these were past experiences based on historical information, preparing cash forecasts, use of balance-sheet data, nature of business enterprises, status of inventory, credit policy of the enterprises, seasonal requirements, volume of sales in relation to fixed assets, status of receivables, procedure of payment of current liabilities and so on. Factors considered for the same purpose covered both accounting and non-accounting information and of them, non-accounting information were given more importance than accounting information. Certain methods like cash budget, cash flow statement, financial reports, ratio charts, bank reconciliation statements and break-even points were applied for cash control. All these methods used for cash control were based on accounting information.

Fifthly, there were various sources of financing working capital requirements and these were bank short-term borrowings, long-term borrowings, trade dues and sundry creditors, equity, non-bank short-term borrowings and retained earnings. Loan from financial institutions was the main source of finacing working capital in the nationalised industries. The main reason for this situation was non-availability of internal sources like retained earnings and accumulated depreciation due to heavy losses incurred in the enterprises. Various factors or bases were taken into account in working capital financing decisions which were liquidity, existing debt-equity ratio, profitability, reserve position, growth or sale, management pattern, security, total net worth, etc. These factors cover both accounting and non-accounting information of which there was tremendous use of accounting information for deciding working capital financing.

As observed in Section 5 of Chapter 5, working capital control measures were not sufficient enough in the selected industries for various reasons. Firstly, the working capital requirements decision was based mostly on hunches and intuition, instead of factual data. Secondly, the annual capital budgets were prepared on traditional lines where projections and estimates were done for expenses and receipts in financial terms. Thirdly, the budget showed the classification of expenses broadly based on objects of expenditure but it failed to show expenditure by activities and by final results. Fourthly, standard costing and variance analysis techniques which are essential for budgetary control purposes were not properly applied in the enterprises under selected industries. These reasons were responsible for poor control in working capital elements resulting in unfavourable variances between the budgeted and the actual total costs of production thereby affecting the profitability of the industries concerned.

Another important area of financial decisions and control is profit decisions and control which are dealt with the operating period of an enterprise. As observed in Chapter-6, profit decisions and control in the enterprises under selected industries were said to be unsound and ineffective because, among the factors considered in various aspects of this decision and control area, the use of accounting information for the purpose was low and inadequate. Various pieces of information were taken into account while deciding profit targets of the nationalised enterprises and these were cost of production, previous year's profit figures, volume of sales, amount of capital investment, volume of production, social consideration, capacity utilization, etc. Factors considered for the purpose covered more non-accounting

dimensions than accounting dimensions. Certain objectives were also kept in mind while deciding the profit targets and these were increased earnings, reducing costs, minimizing capital expenditure, preserving integrity of capital investment or fixed expenditure, provision of goods and services at minimum cost for serving social obligation and so on. Thus, most of the objectives were based more on consideration of accounting information than on that of non-accounting information. Then certain tools applied for profit control were based on accounting information and these tools were: profit budget, operating budget and cost-volume-profit analysis. However, the other reasons responsible for ineffective profit decisions and control were: (i) the profit targets were set at the corporation level without consulting the enterprise heads, (ii) the enterprise heads were not in due time, informed about the profit target which was based on lengthy procedures to be observed for the purpose, (iii) proper analysis of break-even and proforma operating statement was not duly followed in the enterprises, and (iv) proper budgetary control technique was not applied in the enterprises. It was observed that the practice of inappropriate sales forecasts, low production, price escalation, shortage of raw materials, scarcity of spare parts, increased wages, higher repair costs and maintenance charges, higher rates of industrial power, big amount of depreciation, huge amount of interest on bank loan, high rates of taxes, implementation of increased pay scales of staff, poor budgeting practice, etc., were the various factors which accounted for ineffective sales, high cost of production, and high operating overheads. The above state of affairs led to unfavourable variances between budgeted and actual cost of production, and operating overheads and net profit earned.

An important aspect of profit decisions and control is product price decisions adopted during the operating period of an enterprise. Various factors were considered while deciding the sale price of finished products in the nationalised industries and these were: cost of production, cost of sales, market situation, corporation or ministerial directives, total cost plus mark-up, volume of sales, purchasing power of customers, pricing tactics, import price of raw materials, competitive price of other products, world demand, price of synthetic or substitute products, etc. Thus, although both accounting factors were taken into account while fixing up the price, the factors related with non-accounting information outweighed that of accounting information. Certain objectives were also kept in mind behind pricing polities and these were: reduction in costs, increasing profits or reduction of losses, increase in sales, earning foreign exchange, offering customers' services, increasing share of Bangladesh in world market, etc. Thus, the objectives mentioned were more related with accounting dimensions than with non-accounting dimensions.

As observed in Chapter 8, an examination of the existing management information system (MIS) reveals that the financial reporting system was not functioning well and certain deficiencies and shortcomings as identified in the existing MIS hindered the management use of accounting information in financial decisions and control purposes. MIS both at enterprise and corporation levels performed certain functions related with accounting and non-accounting dimentions as discussed in Chapter 7. The main functions of MIS at enterprise level is to collect, compile and circulate such data and information as was required by the respective corporation whereby the individual enterprise's own

requirements were overlooked. Same set of financial reports, statements, returns, etc. prepared at the enterprise level were usually sent to different user groups at enterprise and corporation levels. No specification is done in this respect for the different levels and user-groups. As such, the system was not helpful in administering the information generated at enterprise level for their use in management decision-making and control functions and failed to identify the responsibility for adopting corrective measures in opportune moments.

The deficiencies and shortcomings in the existing MIS hinder the managerial use of accounting information in financial decisions and control. These identified deficiencies were: ineffective feedback system, lack of objectivity, indetermination of responsibility centers, incompleteness, poor variance analysis, low reliability of data, lack of trained personnel in MIS, ambiguousness, inconsistency, lack of computer service, inopportuneness, lack of proper knowledge at preparation level, irrelevance, lack of coordination among departments, and absence of comments and observations on the MIS reports by competent authority. These deficiencies in MIS were thus, highly related with non-accounting information/or dimensions.

In the light of the above situation, the extent of use of accounting information both at corporation and enterprise levels and the nature of impacts or otherwise of use of accounting information on the financial performances as seen through profitability had been examined in Chapter 8. The extent of use of accounting information in financial decisions and control both at corporation and enterprise levels had been analysed through Chi-square test of the responses of the samples. The pfofitability measures, viz., return on sales (ROS),

return on capital employed (ROC) and return on investment (ROI) as the criteria of performance measurements were affected by the use of accounting information in the fourteen identified financial decisions and control areas of the selected industries (as shown in Section 2 of Chapter 8).

In order to examine the nature of impact of the use of accounting information on the profitability of the industries, Pearson's correlation coefficients (r) between each of the aforesaid factors (herein called independent variables) and each of the three aforesaid profitability indexes (herein called dependent variables) had been worked out and shown in Appendix No. VII.

In respect of the extent of use of accounting information both at corporation and enterprise levels, vide Chapter 8, it is evident that the extent of use (high use or low use) of accounting information in all the aforesaid variables were independent of their levels of use (both corporation and enterprise levels). In other words, the opinion variation as regards the extent of use of accounting information was independent of the variations in the levels of use. But there was no significant relationship between the extent of use and the levels of use (not significant at .05 level) in case of all the independent variables except the use of accounting information in capital expenditure financing decision and cash decision where there was significant relationship between the extent and the levels of use because of the high importance being given to the capital expenditure financing at corporation level and low importance of cash decision at corporation level respectively.

From the same analysis, it is evident that among the independent variables, there was high use of accounting information in capital expenditure requirements decision, working capital requirements decision, inventory decision, working capital financing decision, sales target and selling price decision, cost of production decision, operating overheads decision, and profit targets decision both at corporation and enterprise levels. On the otherhand, there was low use of accounting information in capital structure decision, capital expenditure control and accounts receivable decision, both at corporation and enterprise levels.

It is further observed that in case of two independent variables, viz., capital expenditure financing decision and cash decision, the relationship between the extent of use of accounting information was significant at .05 level and in the case of another independent variable, viz., working capital control, the relationship was significant at .10 level. Therefore, there was high use and low use of accounting information in capital expenditure financing at corporation and enterprise level respectively, there was high and low use in cash decisions at enterprise and corporation level respectively and there was high and low use in working capital control at enterprise and corporation levels respectively.

As seen from the Appendix VII, it is evident that correlation coefficients (r) between the extent of use of accounting information in capital expenditure requirements and ROS, ROC and ROI, between extent use of accounting information in capital structure decision and ROS and ROI, between the extent of use of accounting information in capital expenditure financing and ROS, ROC and ROI, between the

extent of use of accounting information in capital expenditure control and ROS, ROC and ROI, between the extent of use of accounting information in working capital requirements and ROS, ROC and ROI, between the extent of use of accounting information in inventory decision and ROS and ROI, between the extent of use of accounting information in accounts receivable and ROC, between the extent of use of accounting information in cash decisions and ROS, ROC and ROI, between the extent of use of accounting information in cost of production decision and ROS, between the extent of use of accounting information in operating overheads decision and ROS, ROC and ROI and between the extent of use of accounting information in profit target decision and ROS and ROI - showed positive linear relationship and had favourable impacts on the profitability of the industries under study.

On the other hand, from Appendix-VII, it was evident that correlation coefficients (r) between the extent of use of accounting information in capital structure decision and ROC, between the extent of use of accounting information in inventory decision and ROC between the extent of use of accounting information in accounts receivables decision and ROS and ROI, between the extent of use of accounting information in working capital financing decision and ROS, ROC and ROI, between the extent of use of accounting information in working capital control and ROC, between the extent of use of accounting information in sales targets and sale price decision and ROS, ROC and ROI, between the extent of use of accounting information in cost of production decision and ROC and ROC, and between the extent of use of accounting information in profit target decision and ROC showed negative linear relationship and had unfavourable impacts on the profitability of the industries under study.

It was evident from the above findings that there was positive relationship between the use of accounting information in financial decisions and control and the profitability measures. Therefore, it can be concluded that the use of accounting information in financial decisions and control had positive impact on the financial performances i.e., profitability of the industries under study.

9.2 Main Issues Regarding Accounting Information Generation and Use for Organizational Effectiveness:

The previous section has presented a brief summary of the findings which paint a picture of the importance, extent and impact of management use of accounting information in financial decisions and control of the nationalised industries in Bangladesh. Certain main issues emerging out of the above findings merit special attention and these are mentioned below:

Accounting System:

The existing accounting system, an important source of accounting information, is viewed in the selected nationalised industries, more as the system for recording and reporting the business operations than as an information system for management decision-making. The financial statements and reports, the snapshots of the financial position of the organization and the main outputs of the accounting system should be designed to facilitate the multi-purpose requirements of management and to focus on the appropriate and basic data required for making effective management decisions, and evaluation and appraisal of enterprise performances.[1]

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1 ANDERSON, DONALD L. and RAUN, DONALD L., Information Analysis in Management Accounting, and HABIBULLAH M., "Accounting As A Tool of Communication", op.cit., p.11.

Accounting Information:

The management use of accounting information in financial decisions and control had been investigated and emphasised in the present study. But in using accounting information for decisions, the inherent limitations thereof as identified in the study should be taken care of. The financial statements reflect primarily the past history and record, whereas decisions are concerned with the future and the past is only a guide to the future.[2] Some of the limitations of accounting information in financial statements arise because; estimates are required, alternative accounting methods are used, differing asset valuation procedures are applied, some assets and liabilities are omitted entirely, price changes affecting assets and liabilities are held, qualitative and non-quantifiable facts are omitted, etc.

Management Pattern:

The management pattern of the selected industries indicates that the powers and responsibilities of the three-tier industrial management system are not clearly delineated, management does not enjoy adequate authority and freedom to run the enterprise operations on commercial principles, appropriate criteria for performance evaluation have not been accepted and provisions for proper use and interpretations of accounting information generated through accounting system have not been developed. As such, there is a great scope to improve the existing management pattern so as to ensure that resources are efficiently and effectively used in attaining the enterprise goals

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2 DAVIDSON, SIDNEY and WEIL, ROMAN L., Handbook of Modern Accounting, Mcgraw-Hill Book Company, 2nd Edition, 1977, pp. 2-5.

and objectives. The management attitude towards the accounting system should be such as to ensure that the data generated through the system, are relevant and applied to the purposes for which these are required to be used.[3]

Enterprise Management:

The management pattern of the nationalised industries shows that the use of accounting information in financial decisions and control is hampered to a great extent because almost all types of decisions are taken at the upper management echelons while implementations thereof are done at the enterprise level where very little authority has been delegated to the enterprise management. But it is the enterprises which should have real authority and freedom for decision-making and implementation as they are the real manufacturing units in the process.[4]

Capital Expenditure Decisions and Control:

The study reveals that there had been more use of non-accounting information than accounting information in deciding capital expenditure requirements, capital structure and capital expenditure financing and in controlling capital expenditure thereby resulting in over capitalization, excessive long-term loans, excessive institutional

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[3] ANDERSON, DONALD L. and RAUN, DONALD L., Information Analysis in Management Accounting, op.cit., p.18.

[4] AHMEAD, QAZI KHOLIQUZZAMAN, "The Manufacturing Sector of Bangladesh - An Overview", The Bangladesh Development Studies, Vol. 1, No. 4, Autumn, 1978, p.405.

finance and absence of proper budgetary control respectively and thus affecting the financial performances of the selected industries.[5]

Working Capital Decisions and Control:

The findings also indicate that the use of accounting information in deciding working capital requirements, working capital structural components and their financing and in controlling working capital elements was, on the whole, low and insufficient resulting in shortage of required working capital, inadequate cash, over-investment in inventory, unsound credit and collection policies, excessive short-term finance and absence of proper control methods for working capital respectively thus affecting the very profitability of the industries under study.[6]

Operating Cycle Approach:

The study also discloses that the nationalised industries under study manage working capital by adopting the conventional approach instead of the operating cycle approach to working capital decisions and control. The operating cycle approach is a recent development in the area. This concept suggests that the optimum level of working capital is to be determined by the duration of the operating cycle and the operating expenses needed for completing the cycle.[7] The problems

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5 As per Sections 3 and 4 of Chapter 4 of the Study.

6 As per Sections 2, 3, 4 and 5 of Chapter 5 of the Study.

7 PARK C. and GLASDON J.W., Working Capital, The Macmillan Company, New York, 1963, quoted by BHATTACHARYA, K.K., "Working Capital and Inflation", Topics in Accounting and Finance, edited by CHAKRABORTY, S.K., et. al., Oxford University Press, Calcutta, 1976, p.53.

related with unscientific conventional approach to working capital can be tackled by the use of the operating cycle concept which can also detect the existence of idle funds without difficulty.[8]

Profit Decisions and Control:

Further, the study shows that there had been scanty use of accounting information in deciding sales target and selling price, cost of production, operating expenses and profit targets resulting in uneconomic sales target and price decisions, higher cost of production, excessive operating overheads and defective determination of profit targets respectively thus adversely affecting the very profitability of the identified industries.[9]

Factors for Profit Targets:

Profit decisions and control functions involve a number of factors which might include, among others, the establishment of long range enterprise objectives, the setting up of an organizational structure, the analysis of operations to determine the behaviour of the costs of production, etc.[10] Profit decisions and control functions in most cases ignore the same factors as revealed in the study. Accounting information about cost behaviour can be used in the development of such profit targets and control function.

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8 Ibid, p.54. and SHARMA, B.S., "Funds Flow Analysis" Unpublished Research Paper, Faculty of Management Studies, University of Delhi, 1983, p.2.

9 As per Section 3 of Chapter 6 of the Study.

10 ANDERSON, DONALD L. and RAUN, DONALD L., Information Analysis in Management Accounting, op.cit., p.76.

Sales Targets/Forecasts:

Deciding the sales targets is a factor of major importance in profit determination. The study reveals that sales targets are determined on consideration of more non-accounting factors than accounting ones. Sales may be forecast by such procedures as using the past relationship of sales to a multiple accounting and related information like sales price, advertising, salaries and/or commissions of sales personnel, credit policy, and product research expenditure, or by obtaining the opinion of managers and/or salesmen.[11]

Pricing of Products:

Both accounting and non-accounting information as considered in fixing up the prices of products of the selected industries were identified in the study and it was found that for the said purpose, the non-accounting information like social consideration, corporations' or ministerial directives, purchasing power of customers, pricing tactics, mark-up, etc., outweighed that of accounting information like cost of production, cost of sales, import price of raw materials, price of synthetic or substitute products, financial profitabilty,etc. resulting in the fixation of the price of products at below the costs and thus forming the administered prices. But, if the prices of products are kept artificially low, it might lead to less economical utilization of resources and, on the other hand, if there was absence of price regulation, it might lead the enterprises to show profits without necessarily being efficient in their operations.[12] The nationalised industries are to-day treated as the creators of new

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[11] Ibid., p. 135.

[12] KUCHHAL S.C., Corporation Finance : Principles and Problems, op.cit., p.503.

wealth and should no longer function on a non-profit-no-loss basis. Rather, the system of price determination should serve the principal national objectives like rational allocation of scarce resources, optimal utilization of resources and desired growth of the economy. As such, the nationalised industries under study, should pay their way and not run in losses unless there are clear-cut reasons of public interest.

Budgeting:

The study also reveals that the budgetary procedures adopted in the selected industries follow the traditional pattern in the sense that the system of classification of expenditure adopted in the budget is not done, in most cases, on the basis of previous accounting data and past records and does not link the expenditure to activities and end-results, thus necessitating the requirements for introducing performance budgeting. It is alleged that the approved budgets are not examined in due time nor are they given due importance and the Government has not been able to make use of this important instrument of control and accountability.[13] The budgets should be prepared by the enterprises under study in every detail and that beyond serving as a base for obtaining funds only, they should serve enterprise objectives and management decision-making and control functions.

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13 HYE, MD. ABDUL, "Acceptance and Use of Budget by Managers of Nationalised Industrial Enterprises in Bangladesh", op.cit., p. 76.

Management Information and Financial Reporting System:

The deficiencies and short comings in the usefulness of the existing management information and financial reporting system as identified in the study greatly hinder the use by management of accounting information in the identified financial decisions and control areas and therefore, the main deficiencies were:[14] ineffective feed-back system, lack of objectivity, indetermination of responsibility centres, poor variance analysis, ambiguousness, incompleteness, low reliability and cosmetization of data, lack of trained personnel in MIS Division/ Section, lack of proper knowledge at preparation level, etc. There is a common feeling that an unduly large number of reports and information generated through the system are hardly put to adequate use for management decisions. The existing information system should, therefore, be streamlined and be made effective enough to help use the accounting information for management decisions and control purposes in the selected industries.

Performance Evaluation:

The study further reveals that proper criteria for performance evaluation had not been developed in the selected industries except a vague reference to the efficiency of performance in the sense of maximum capacity utilization. But proper evaluation can provide a pragmatic response to the probelms of the nationalised industries. As such, the Bangladesh Planning Commission has stressed the need

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[14] As per Section 4 of Chapter 7 of the Study.

for running the industrial enterprises on the basis of commercial principles and as such, profitability had been advocated as the criterion for evaluating the performance of the industries.[15]

Impacts of Use of Accounting Information:

The nature of the overall impacts of the use of accounting information in the selectedd financial decisions and control areas on the performance evaluation criteria i.e. the profitability, had been examined and analysed by the Pearsons' correlation coefficients between the extent of use of accounting information in financial decisions and control areas and the profitability indexes, viz., Return on Sales (ROS), Return on Capital (ROC) employed and Return on Investment (ROI) and it was revealed that there was positive relationship between them and that the use of accounting information in financial decisions and control had positive impact on the profitability, i.e., the financial performances of the selected industries.[16]

9.3 Suggested Future Outlook:

Although the inquiry is primarily a descriptive as well as empirical study of the selected nationalised industries, certain conclusions about the management use of accounting information could be tentatively drawn. The above summaries and main issues, might provide certain insights into the practice and extent of management

[15] PLANNING COMMISSION, GOVERNMENT OF THE PEOPLES' REPUBLIC OF BANGLADESH, The First Five Year Plan 1973-78, op.cit., p.259.

[16] As per Section 3 of Chapter 8 of the Study.

use of accounting information in financial decisions and control areas in the nationalised industries, and might explore major environmental and other factors or forces influencing the use of accounting information. As such, after brief review of the findings in the above section, let us now proceed to discuss some implications as well as directions for future research in the concluding section of this thesis with the expectations that they would provide helpful direction to the policy makers, researchers, and concerned authorities of the selected industries.

The findings suggest that increase in the management use of accounting information in financial decisions and control in case of the selected nationalised industries might lead to better financial performances resulting in higher profitability. The findings further suggest that the use of accounting information in financial decisions and control is the combined outcome of the interaction of many factors referred to earlier which should be attended to for increasing the the use of accounting information in financial decisions and control.

Many problems, defects and deficiencies were identified in the use of accounting information in various areas of financial decisions and control in the previous sections and it can now be rightly said that the use of accounting information is also dependent on the removal and solution of the aforesaid problems, defects and deficiencies.

The objective of accounting may be viewed not only as recording and reporting the business operations but as providing relevant

financial information for both external and internal users, particularly for helping management of the selected industries in its decision making and control functions. In pursuing this objective, management attitude and accounting system should be reorganized to take cognizance of the management and other users' needs for decision making purpose. Research studies into the use of accounting information are to assist the development of management accounting approaches for creating a congenial environment to help use by management of accounting information in financial decisions and control in the nationalised industries. A useful accounting system, as far as possible, should meet general qualifications of objectivity, realism, prudence, comparability, consistency, intelligibility and ease and economy in preparation.[17]

High use of accounting information can be ensured by providing knowledge regarding the proper purposes of generating accounting information through formal and informal training on the importance of such use and application of accounting information and techniques in managements financial decisions and control. By identifying the reasons for low use and the problems hindering the proper use of accounting information, the present study facilitates the remodelling of the management pattern and accounting system. Further, the observations made on the management pattern suggest that there was a need for granting maximum autonomy with provisions for efficient monitoring of the performances of enterprise management so that it could take correct decision and prompt action in its day-to-day operations.

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[17] MISHRA, N., Accounting for Price Level Changes, Sultan Chand and Sons, New Delhi, 1st. Edition, February 1982, p.29.

Feedback or follow-up is one of the important factors which influences the proper use of accounting information. Higher levels of management usually have the tendency to collect the financial statements, reports, etc. as per statutory provisions without regular feedback function. Feedback necessitates the preparation of the financial statements, reports, etc. at frequent intervals all the year round. Higher levels of management should entertain and receive reports on the financial as well as over-all performancesof the enterprises with summaries thereof and send back its comments with necessary instructions and suggestions for corrections and proper implementation.

In order to syncronize the gap between the decision-making function at the higher levels and the business operations at the lower levels with regards to working capital, the 'operating or activity cycle' approach may be extensively used by the nationalised industries.

Virtually, all the enterprises under selected industries are multi-product. This is a complicating factor in that it makes more difficult the provision of cost and demand information for product price decisions in necessary detail and form, particularly in the multi-product enterprises or industries. It is also an important aspect of business behaviour itself to be looked into in the identified industries.

Further Directions for Future Research

In the previous sections, we have presented the summary and implications in terms of its theoretical orientation. The research problem we have studied is of a wider domain as well as of a very complex nature. As such, an individual attempt is considered insufficient to investigate the problem in its complete form. Thus, it is clear that there is a need for further research to be conducted in this direction to explore the problem in more details.

The findings of this research pointed out some issues and questions for further investigation. One of the directions for future research is towards extending the scope and boundary of this study. Only three important areas of financial decisions and control viz., capital expenditure decisions and control, working capital decisions and control, and profit decisions and control were included in the present research. But there is a need to extend the study over the other areas of financial as well as managerial decisions and control to find out the extent of use and impact of such use or otherwise on the financial as well as over-all performances for building up wider generalization about the implications of use of accounting information.

A study regarding the use of accounting information in financial decisions and control in other than those under study to reveal the impact of technology like computarized management information system and market orientation on the use of accounting information for management decisions may expose some meaningful theories and concept.

Research investigations as regards the different managerial styles of use of accounting information in different levels of management may also contribute significantly to the accounting system design and management pattern.

It is essential to find out the attitude of management towards the use of accounting information in management's different areas of decision-making and control functions in general as well as to explore the impact of organization structure on the extent of use of accounting information.

The findings of this study also suggest that further research investigation into management decision styles vis-a-vis the use of accounting information in management decisions and control might identify any variation between decision styles and such use.

Few suggestions for further research in the area of management use of accounting information in decisions and control have been put forward here but the scope for the design of further studies remains wide open. In order to broaden the area of application of accounting information, the need for further investigations in this area cannot be ignored. It is hoped that the present study would provide a useful guide for any such attempt in future.

APPENDIX - I(A)

Original Requirements of Total Capital Expenditure (Element-wise under the Selected Industries Established During the Period 1951

(In

Selected Industries (Corporation-wise) / Major Elements of Capital Expenditure	Jute		Cotton Textile		Sugar and Food		Steel and En	
	16714 looms	1000 Units capacity	48500 Spindles	1000 Units capacity	119,650 Tons	1000 Units capacity	268,185 Tons	10 Un ca
Pre-Construction Expenditure	9.31	0.56	0.45	0.01	3.41	0.03	8.90	
Construction Works	242.81	14.53	12.38	0.25	77.74	0.65	172.91	
Machinery and Equipments	283.18	16.94	14.98	0.31	100.75	0.84	292.46	
Other Costs	85.70	5.13	4.19	0.09	31.10	0.26	81.73	
Total of Original Estimated Cost	621.00	37.16	32.00	0.66	213.00	1.78	556.00	

(Source: Bangladesh Industrial Development Corporation (BIDC), BIDC in Fig Planning Division, BIDC, 1972, Dacca).

APPENDIX – I(B)

Original Requirements of Total Capital Expenditure (Element-wise) of
under Selected Nationalised Industries Established During the Perio

(In

Selected Industries (Corporation-wise) / Major Elements of Capital Expenditure	Jute		Cotton Textile		Sugar and Food		Steel and Engin	
	12 lakh sq. Yrds.	1000 Units capacity	137,000 Spindles	1000 Units capacity	6550 Tons	1000 Units capacity	10,000 Tons	1000 Units capac
Pre-Construction Expenditure	4.50	0.004	6.18	0.045	1.10	0.168	3.51	0.
Construction Works	102.58	0.085	68.00	0.496	3.91	0.597	67.18	6.
Machinery and Equipment	131.32	0.109	274.18	2.001	14.66	2.238	122.50	12.
Other Costs	35.10	0.029	79.55	0.581	13.04	1.991	26.35	2.
Total of Original Estimated Cost	273.50	0.227	427.91	3.123	32.71	4.994	219.54	21.

(Source: Project Proformas of the Individual Enterprises.)

APPENDIX - II(A)

Important Items of Profit and Loss A/c and Balance Sheet of 76 Enterpr Under Jute Industry

(In Mi

Items / Years	Gross Fixed Assets at cost	Net Fixed Assets	Debtors	Inventory (Stock and Stores)	Advance Deposits and Pre-Payments (Less Prov.)	Cash Bank Balance	Total current assets	Bank Over-draft (O/D)	Liabi-lities for goods	Liabi-lities for expen-ses	Li li fo ot Fi
1975-76	2931	1936	458	1327	392	56	2233	926	243	422	2
1976-77	3026	1852	457	1324	422	54	2256	1167	190	427	2
1977-78	3231	1889	833	1694	465	80	3072	1764	190	698	2
1978-79	3433	1909	690	2112	695	102	3599	1701	226	1041	2
1979-80	3674	1955	1134	2663	641	137	4575	1522	309	838	3
Average:	3259	1908	714	1824	523	86	3147	1416	232	685	2

APPENDIX - II(A) (Contd.)

Items / Years	Debentures	Capital Employed	Equity Capital	Retained Earnings	Total Sales	Cost of Production	Market value of output	EBIT	Total Tangible Assets	Working Capital	Net Profit
1975-76	447	2368	703	(937)	2958	2758	2991	(363)	4169	432	(430)
1976-77	465	2115	703	(1410)	2063	3098	3087	(719)	4108	263	(623)
1977-78	471	2060	703	(1817)	4065	4387	4248	(1060)	4961	171	(968)
1978-79	455	2274	699	(1326)	4534	4733	4950	(944)	5508	365	(695)
1979-80	454	3090	697	521	6346	5070	5875	513	8530	1535	1062
Average:	458	2461	701	(994)	4169	4009	4230	(515)	5055	553	(331)

(Source: Annual Reports and Performance Reports of Bangladesh Jute Mills C
for the years, 1975/76 to 1979/80)

APPENDIX - II(B)

Items of Profit and Loss A/C and Balance Sheet of 59 Enterprises under Cotton Textile Industry

(In Mill

Items / Years	Gross Fixed Assets	Net Fixed Assets	Cash and Bank	Debtors Advances & Loans	Debtors	Inventory	Other Current Assets	Total Current Assets	Total Tangible Assets	Trade Dues etc.	Other Loan	Cash Credit and Bank O/D
1975-76	805	488	85	565	225	756	131	153	2025	997	381	146
1976-77	827	477	90	840	222	440	33	1403	1880	908	441	244
1977-78	1120	771	100	1313	227	430	388	2231	3002	1060	1193	245
1978-79	1594	1168	150	1200	240	495	462	2307	3475	1100	1250	286
1979-80	1524	1004	49	1046	270	738	500	2333	3337	1150	1348	233
Average:	1174	782	94	993	237	572	303	1962	2744	1043	923	230

APPENDIX - II(B) (contd.)

Items / Years	Total Debts	Equity Capital	Retained Earnings	Net-Worth	Market Value of Output	Actual Sales (Net)	Cost of Production (Actual)	Total Cost	EBIT	Interest Charges	Net Profit	Mar Val of Equ
1975-76	1749	223	53	276	1862	1820	1332	1609	211	35	17	125
1976-77	1775	196	(91)	105	1498	1813	1542	1897	(84)	58	(138)	100
1977-78	2979	169	(146)	23	2062	2072	1729	2093	(21)	44	82	140
1978-79	3671	262	(458)	(196)	1900	2498	2289	2315	183	46	(36)	130
1979-80	3479	97	(239)	(142)	2175	1445	2458	2488	(43)	67	(187)	150
Average:	2731	189	(176)	13	1899	2130	1870	2080	50	50	(52)	133

(Source : Annual Reports and Performance Reports of Bangladesh Textile for the years, 1975/76 to 1979/80.)

APPENDIX - II(C)

Items of Profit and Loss A/c and Balance Sheet of 43 Enterprises under Sugar and Food Industry.

(In Mill

Items / Years	Gross Fixed Assets	Net Fixed Assets	Cash and Bank	Debtors, Advances and Loans	Debtors	Inventory	Other Current Assets	Total Current Assets	Total Tangible Assets	Trade Dues, etc.	Other loan
1975-76	665	406	48	365	172	543	26	982	1388	392	164
1976-77	668	409	50	387	144	793	46	1276	1685	433	135
1977-78	740	476	64	428	189	798	13	1303	1779	449	241
1978-79	880	520	82	412	144	706	14	1214	1734	456	261
1979-80	903	522	63	533	181	915	14	1525	2047	496	330
Average	771	467	61	425	166	751	23	1260	1727	446	226

APPENDIX - II(C) (contd.)

Items / Years	Total Debts	Equity Capital	Retained Earnings	Net Worth	Market Value of Output	Actual Sales (Net)	Cost of Production (Actual)	Total Cost	EBIT	Interest Charges	Net Profit/ Loss
1975-76	1208	250	(70)	180	1273	1312	980	1101	211	45	(21)
1976-77	1473	251	(39)	212	1650	1432	1034	1486	(54)	54	29
1977-78	1598	262	(81)	181	1993	2010	1600	1728	282	63	17
1978-79	1553	264	(83)	181	2050	2136	1725	1773	363	57	21
1979-80	1799	318	(70)	248	2175	2268	1695	1828	440	58	37
Average	1526	269	(68)	200	1828	1832	1407	1583	249	55	16

(Source: Annual Reports and Performance Reports of Bangladesh Sugar and Food In for the years, 1975/76 to 1979/80 and Financial Statistics of the Ente from 1972/73 to 1980/81.)

APPENDIX – II(D)

Items of Profit and Loss A/C and Balance Sheet of 37 Enterprises under Steal and Engineering Industry

(In Mil

Items / Years	Gross Fixed Assets	Net Fixed Assets	Cash and Bank	Debtors, Advances and Loans	Debtors	Inventory	Other Current Assets	Total Current Assets	Total Tangible Assets	Trade Dues, etc.	Other Loan	Cash Credits and Bank O/D
1975–76	964	717	63	784	201	460	238	1543	2260	831	182	241
1976–77	978	672	175	807	207	392	192	1565	2237	908	163	125
1977–78	996	631	127	515	193	417	600	1659	2290	1020	221	87
1978–79	638	624	108	567	187	1182	–	1857	2481	797	575	143
1979–80	642	615	142	831	276	1513	21	2507	3122	953	865	310
Average	844	651	123	700	213	793	210	1826	2477	902	401	181

APPENDIX - II(D) (contd.)

Items / Years	Total Debts	Equity Capital	Retained Earnings	Net Worth	Market Value of Output	Actual Sales (Net)	Cost of Production (Actual)	Total Cost	EBIT	Interest Charges	Net Profit	Mar Val of Equ
1975-76	2126	188	(54)	134	1200	1177	856	1038	139	61	40	157
1976-77	2059	188	(10)	178	1498	1562	1205	1412	150	58	83	152
1977-78	2159	147	(16)	131	1505	1528	1140	1370	158	50	54	144
1978-79	2357	181	(57)	124	1560	2054	1996	1996	58	53	115	160
1979-80	3005	174	(57)	117	1600	2531	2504	2504	27	71	145	157
Average	2341	175	(39)	136	1472	1770	1540	1664	106	59	87	154

(Source: Annual Reports/Accounts and Performance Reports of Bangladesh Steel a
Corporation for the years, 1975/76 to 1979/80.)

APPENDIX - II(E)

Items of Profit and Loss A/C and Balance Sheet of 30 Enterprises under Chemical, Fertilizer and Paper Industry

(In

Items / Years	Gross Fixed Assets	Net Fixed Assets	Cash and Bank	Debtors, Advances and loans	Debtors	Inventory	Other Current Assets	Total Current Assets	Total Tangible Assets	Trade Dues, etc.	Other Loan	Cash Credits and Bank O/D	Te Cu Li
1975-76	2534	1821	24	860	134	536	287	1707	3528	1049	310	618	19
1976-77	3248	2316	38	1265	354	897	372	2572	4888	1191	412	526	21
1977-78	3400	2241	(74)	1670	208	601	635	2832	5073	1168	539	633	23
1978-79	3886	2478	52	2050	333	275	708	3085	5563	715	1721	52	24
1979-80	3927	2256	20	982	486	252	2499	3753	6009	1153	1705	123	29
Average	3399	2222	12	1365	303	512	901	2790	5012	1055	937	391	23

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APPENDIX - II(E) (contd.)

Items / Years	Total Debts	Equity Capital	Retained Earnings	Net Worth	Market Value of Output	Actual Sales (Net)	Cost of Production (Actual)	Total Cost	EBIT	Interest Charges	Net Profit	Market Value of Equity
1975-76	4299	401	(1172)	(771)	1043	1050	961	1150	(100)	114	(247)	2959
1976-77	4529	546	(187)	359	1630	1587	1115	1681	(94)	110	168	3584
1977-78	4017	1480	(424)	1056	1991	1856	1543	2045	(189)	144	(125)	4505
1978-79	4628	396	539	935	2527	2271	1660	2400	(129)	204	(43)	5850
1979-80	5093	396	520	916	2350	2711	1700	2966	(255)	203	(32)	4995
Average	4513	644	(145)	499	1908	1895	1396	2048	(153)	155	(56)	4219

(Source: Annual Reports/Accounts and Performance Reports of Bangladesh Chemica Corporation for the years, 1975/76 to 1979/80.)

APPENDIX – III

Various Important Average Ratios of the Industries Under Study for the Period Covering 1975–76 to 1979–80.

Ratios / Industries (Corporation-wise)	Current Ratio (CA÷CL)	Quick Ratio (CA–Inventory ÷ CL)	Working Capital to Tangible Assets (WC÷ Assets) (In percentage)	Inventory Turnover (Sales ÷ Inventory) (In Times)	Average Collection period (Accounts Receivables x 365 ÷ Sales) (In days)	Net Fixed Assets Turnover (Sales ÷ NFA) (In times)	Total Ass Turnover (Sales ÷ (In times
Jute	1.21	0.51	10.93	2.28	112	2.78	82.47
Cotton Textile	0.89	0.63	(8.53)	3.72	103	2.72	77.62
Sugar and Food	1.20	0.49	12.27	2.44	72	3.92	106.08
Steel & Engineering	1.23	0.70	13.81	2.23	81	2.72	71.46
Chemical & Fertiliger	1.17	0.95	8.12	3.70	228	0.85	37.80

APPENDIX - III (Contd.)

Ratios / Industries (Corporation-wise)	Return on Networth (NP ÷ NW) (In percentage)	Return on Total Original Investment (EBIT÷TA) (In percentage)	Return on Present Investment (ROI) (EBIT÷ TA) (In percentage)	Return on Capital Employed (ROC) (NP÷Capital) (In percentage)	Debts to Total Assets (Debts÷ TA) (In percentage)	Time Interest Earned (EBIT÷Interest) (In percentage)
Jute	NC	(15.80)	(10.18)	(13.45)	105.80	(1.93)
Cotton Textile	(400.00)	4.26	1.82	(9.51)	99.53	1.00
Sugar and Food	8.00	32.29	14.42	2.36	88.36	4.53
Steel & Engineering	63.97	12.56	4.28	8.75	94.51	1.80
Chemical & Fertilizer	(11.22)	(4.50)	(3.05)	(2.18)	90.04	0.99

[Source: Based on Appendix-II(A) to II(E)]

APPENDIX - IV(A)

Important Items of Budget Estimates for 76 Enterprises under Jute Industry for the Period Covering 1975-76 to 1979-80

(In Mi

Items / Years	Cash and Bank		Sales of Merchandise Product		Cost of Production		Fixe
	Budget Estimate	Revised Budget Estimate	Budget Estimate	Revised Budget Estimate	Budget Estimate	Revised Budget Estimate	
1975-76	90	60	3060	2857	2187	2420	7
1976-77	93	80	3054	3497	2316	2630	7
1977-78	146	103	3215	3996	3411	3993	12
1978-79	160	138	3893	4395	5524	4518	12
1979-80	175	150	4921	5690	5252	5298	13
Average	133	106	3629	4127	3738	3772	10

(Source: Budget Statements of Enterprises Under B.J.M.C. for 1974-7

APPENDIX - XV(B)

Important Items of Budget Estimates for 59 Enterprises under Cotton Textile Industry for the Period, 1975-76 to 1979-80

(In

Items / Years	Cash and Bank		Sales		Cost of Production		Fixed Cost
	Original Estimate	Revised Estimate	Original Estimate	Revised Estimate	Original Estimate	Revised Estimate	
1975-76	122	100	1774	1834	1204	1297	400
1976-77	114	100	2432	1964	1268	1402	419
1977-78	140	130	2403	2754	1440	1609	576
1978-79	152	124	3391	2859	3102	2816	859
1979-80	165	153	3867	3062	3812	3256	1268
Average	139	121	2773	2495	2165	2076	704

(Source: Budget Statements of the Enterprises under B.T.M.C. for 1974

APPENDIX - IV(C)

Important Items of Budget Estimates for 43 Enterprises under Su
and Food Industry for the Period Covering 1975-76 to 1979-80.

(In

Items / Years	Cash and Bank		Sales		Cost of Production		Fixe Cost
	Original Estimate	Revised Estimate	Original Estimate	Revised Estimate	Original Estimate	Revised Estimate	
1975-76	52	55	1620	1600	778	900	308
1976-77	77	61	1774	1940	884	943	340
1977-78	(334)	(350)	1904	1840	1370	1510	430
1978-79	(350)	(387)	1933	2594	1843	2555	527
1979-80	(175)	(311)	2294	2300	2179	2279	557
Average	(146)	(186)	1905	2055	1411	1637	432

(Source: Budget Statements of the Enterprises under B.S.F.I.C. for 1974-75 to 198

APPENDIX - IV(D)

Important Items of Budget Estimates for 37 Enterprises under
and Engineering Industry for the Period, 1975-76 to 1979-80

(I

Items / Years	Cash and Bank		Sales		Cost of Production		Fixed Cost
	Original Estimate	Revised Estimate	Original Estimate	Revised Estimate	Original Estimate	Revised Estimate	
1975-76	140	140	1576	1160	726	820	198
1976-77	201	201	2073	2073	1010	1200	270
1977-78	94	77	2000	2216	954	1100	310
1978-79	17	31	2617	2713	2509	2599	889
1979-80	51	17	3531	3153	3362	3022	564
Average	101	93	2359	2263	1712	1748	446

(Source: Budget Statements of the Enterprises under B.S.E.C. for 1974-75 to

APPENDIX - IV(E)

Important Items of Budget Estimates for 30 Enterprises under C
and Fertiliser Industry for the Period, 1975-76 to 1979-80.

(In

Items / Years	Cash and Bank		Sales		Cost of Production		Fixed Cost
	Original Estimate	Revised Estimate	Original Estimate	Revised Estimate	Original Estimate	Revised Estimate	
1975-76	142	36	2156	1571	805	909	280
1976-77	117	134	2406	2064	966	1072	353
1977-78	94	114	2487	2127	1308	1500	488
1978-79	53	79	2311	2587	2084	2445	599
1979-80	63	68	3130	3398	2925	3347	878
Average	94	86	2498	2349	1618	1855	520

(Source: Budget Statements of the Enterprises under B.C.I.C. for 1974-75 to

APPENDIX - V(A)

Important Data on 74 Industrial Enterprises Set-up and Completed by PIDC/EPI during the Period, 1952 - 1972.

(In Mil

Sl. No.	Names of Units (Selected Industry -wise)	Date of commencing production of the enterprise	Date of commencing commercial production	Gestation period (years)	Original Cost			Revised Cost		
					Local Currency	Foreign Exchange Component	Total investment cost	Local currency	Foreign Exchange Component	Total investment cost
1	2	3	4	5	6	7	8	9	10	11
	JUTE INDUSTRY									
1.	Adamjee Jute Mills Ltd., Narayanganj	July 1950	June 1956	6 yrs	26.00	40.00	66.00	27.00	45.00	72.00
2.	Latif Bawany Jute Mills Ltd., Dhaka	Dec. 1953	March 1956	2½ yrs	2.40	3.60	6.00	2.40	3.60	6.00
3.	Karim Jute Mills Ltd., Dhaka.	Dec. 1954	March 1957	2½ "	3.00	4.50	7.50	3.00	4.50	7.50
4.	Dhaka Jute Mills Ltd., Dhaka.	Dec. 1954	Dec. 1956	2 "	3.00	4.50	7.50	3.00	4.50	7.50
5.	Nishat Jute Mills Ltd., Dhaka	Dec. 1954	Dec. 1957	3 "	1.60	2.40	4.00	1.60	2.40	4.00
6.	Peoples Jute Mills Ltd., Dhaka	July 1951	July 1954	3 "	6.50	10.00	16.50	9.90	12.00	21.90
7.	Crescent Jute Mills Ltd., Dhaka	March 1952	June 1954	2½ "	6.50	10.00	16.50	6.50	10.00	16.50
8.	Platinum Jubilee Jute Mills Ltd., Khulna	Dec. 1954	Dec. 1958	4 "	10.00	15.00	25.00	10.00	18.00	28.00
9.	Star Jute Mills Ltd., Khulna	March 1955	Dec. 1958	3½ "	4.00	6.00	10.00	4.00	6.00	10.00
10.	Daulatpur Jute Mills Ltd., Khulna	Dec. 1952	Oct. 1955	3 "	3.00	4.50	7.50	8.00	4.50	7.50

APPENDIX - V(A) contd.

1	2	3	4	5	6	7	8	9	10	11
11.	Amin Jute Mills Ltd., Chittagong	July 1951	July 1954	3 yrs	6.50	10.00	16.50	6.50	10.00	16.50
12.	Chittagong Jute Mfg. Co. Ltd., Chittagong	Dec. 1952	Aug. 1954	1½ "	4.00	6.00	10.00	4.00	6.00	10.00
13.	Qaumi Jute Mills Ltd., Sirajganj, Pabna	Nov. 1960	Aug. 1962	2 "	6.00	9.00	15.00	6.00	9.00	15.00
14.	United Jute Mills Ltd., Narsingdi	Jan. 1961	Jan. 1963	2 "	6.00	9.00	15.00	6.00	9.00	15.00
15.	Bangladesh Jute Mills Ltd., Ghorasal	Dec. 1960	Sept. 1962	1½ "	6.00	9.00	15.00	6.00	9.00	15.00
16.	W. Rahman Jute Mills Ltd., Chandpur	Dec. 1950	April 1954	3½ "	6.00	9.00	15.00	6.00	9.00	15.00
17.	Delta Jute Mills Ltd., Chowmuhani	Nov. 1961	Aug. 1964	2½ "	6.00	9.00	15.00	6.00	9.00	15.00
18.	Ajax Jute Mills Ltd., Khulna	Nov. 1961	Dec. 1964	3 "	6.00	9.00	15.00	6.00	9.00	15.00
19.	Alijan Jute Mills Ltd., Narsingdi	Nov. 1961	April 1965	3½ "	6.00	9.00	15.00	6.00	9.00	15.00
20.	Cooperative Jute Mills Ltd., Ghorasal	Nov. 1961	May 1965	3½ "	6.00	9.00	15.00	6.00	9.00	15.00
21.	Expansion of United Jute Mills, Narsingdi	June 1962	May 1965	3 "	5.00	10.00	15.00	5.00	10.00	15.00
22.	Expansion of Bangla-desh Jute Mills Ltd., Ghorasal	June 1962	June 1965	3 "	5.00	10.00	15.00	5.00	10.00	15.00
23.	Expansion of W. Rahman Jute Mills Ltd., Chandpur	June 1962	June 1965	3 "	5.00	10.00	15.00	5.00	10.00	15.00
24.	Star Alkaid Jute Mills Ltd., Chandpur	Sept. 1962	July 1965	2½ "	5.00	10.00	15.00	5.00	10.00	15.00
25.	Afil Jute Mills Ltd., Khulna	Sept. 1962	May 1966	3½ "	5.00	10.00	15.00	6.00	10.00	16.00

APPENDIX – V(A) contd.

1	2	3	4	5	6	7	8	9	10	11
26.	Kohinoor Jute Mills Ltd., Gouripur	Sept. 1962	June 1966	3½ yrs	5.00	10.00	15.00	6.00	10.00	16.00
27.	Maqbulur Rahman Jute Mills Ltd. Chittagong	Sept. 1963	July 1966	3 "	5.00	10.00	15.00	6.00	10.00	16.00
28.	A.K. Khan Jute Mills Ltd., Chittagong	Sept. 1962	May 1966	3½ "	5.00	10.00	15.00	6.00	10.00	16.00
29.	Sattar Jute Mills Ltd., Ghorasal	Sept. 1963	April 1966	3½ "	5.00	10.00	15.00	6.00	10.00	16.00
30.	Jabbar Jute Mills Ltd., Bhairab Bazar	Sept. 1963	Nov. 1967	4 "	5.00	10.00	15.00	6.00	10.00	16.00
31.	National Jute Mills Ltd., Ghorasal (EPIDC Jute Mills No.1)	Sept. 1963	Oct. 1967	4 "	5.00	10.00	15.00	6.00	10.00	16.00
32.	Sonali Jute Mills Ltd. Khulna (EPIDC Jute Mills No.2)	Sept. 1963	Jan. 1968	4½ "	5.00	10.00	15.00	6.00	10.00	16.00
33.	Aleem Jute Mills Ltd. Khulna(EPIDC Jute Mills No. 3)	Sept. 1963	April 1968	4½ "	5.00	10.00	15.00	6.00	10.00	16.00
34.	Expansion of Qumi Jute Mills, Sirajganj, Pabna	June 1963	May 1967	4 "	5.00	10.00	15.00	6.00	10.00	16.00
35.	Eastern Jute Mills Ltd., Khulna (EPIDC Jute Mills No.4)	Sept. 1963	Oct. 1967	4 "	5.00	10.00	15.00	6.00	10.00	16.00
36.	Pubali Jute Mills Ltd., Ghorasal	Oct. 1965	Jan. 1969	3½ "	6.50	10.00	16.50	8.00	10.00	18.00
37.	Nawab Askari Jute Mills Ltd., Kenchu, Dhaka	Oct. 1965	May 1969	3½ "	6.50	10.00	16.50	8.00	10.00	18.00
38.	Al-haj Jute Mills Ltd. Sharishabari, Mymensingh/65	Oct.	Aug. 1969	4 "	6.50	10.00	16.50	8.00	10.00	18.00

APPENDIX - V(A) contd.

1	2	3	4	5	6	7	8	9	10	11	
39.	Nabarun Jute Mills, Kanchan, Dhaka	Oct. 1965	July 1969	3½ yrs	6.50	10.00	16.50	8.00	10.00	18.00	8
40.	A.R. Howlader Jute Mills Ltd., Dhaka	Oct. 1965	March 1970	4½ "	6.50	10.00	16.50	8.00	10.00	18.00	8
		Total :			232.00	388.50	620.50	255.90	398.50	654.40	27
	COTTON TEXTILE INDUSTRY										
1.	Muslim Cotton Mills Ltd., Kaliganj	Dec. 1951	June 1954	2½ yrs	6.00	12.00	18.00	8.00	12.00	20.00	8
2.	Expansion of Muslim Cotton Mills, Kaliganj	Dec. 1961	June 1966	4½ "	5.50	6.00	11.50	7.00	7.00	14.00	6
3.	Modernisation and Balancing of Muslim Cotton/60 Mills, Ltd., Kaliganj	Dec. 1962	Dec. 1962	2 "	1.00	1.50	2.50	1.00	2.00	3.00	0
		Total :			12.50	19.50	32.00	16.00	21.00	37.00	14

APPENDIX - V(A) contd.

1	2	3	4	5	6	7	8	9	10	11	
	SUGAR AND FOOD INDUSTRY										
1.	Zeal Pak (Bangla) Sugar Mills Ltd., Dewanganj, Mymensingh	Nov. 1955	Dec. 1958	3 yrs	9.00	7.00	16.00	13.80	4.50	18.00	
2.	Thakurgaon Sugar Mills Ltd., Thakurgaon, Dinajpur	Oct. 1955	Dec. 1958	3½ "	10.00	8.00	18.00	9.60	10.40	20.00	12
3.	Rangpur Sugar Mills Ltd., Mohimaganj, Rangpur	Oct. 1954	Dec. 1957	3½ "	11.34	10.00	21.34	14.00	11.56	25.56	16
4.	Jaipurhat Sugar Mills Ltd., Jaipurhat, Bogra	Dec. 1958	Feb. 1963	4 "	11.00	9.00	20.00	13.00	10.00	23.00	13
5.	Rajshahi Sugar Mills, Hariana, Rajshahi	March 1962	Dec. 1964	2½ "	10.00	9.00	19.00	10.00	10.00	20.00	
6.	Kushtia Sugar Mills, Jagati, Kushtia.	Dec. 1960	June 1965	4½ "	10.00	9.00	19.00	10.00	10.00	20.00	
7.	Expansion of Thakurgaon Sugar Mills, Dinajpur	Sept. 1962	June 1965	2½ "	2.00	2.00	4.00	2.00	2.00	4.00	
8.	Mobarakganj Sugar Mills, Jessore	May 1964	Jan. 1968	3½ "	11.00	10.00	21.00	13.00	12.00	25.00	11
9.	Shyampur Sugar Mills, Rangpur	Dec. 1963	Jan. 1968	4 "	11.00	9.00	20.00	13.00	12.00	25.00	13
10.	Ground Nut Oil Mills, Kuliarchar, Mymensingh	Dec. 1964	July 1967	2½ "	3.75	0.73	4.48	3.75	0.73	4.48	
11.	Panchagar Sugar Mills, Panchagar, Dinajpur	May 1964	Nov. 1969	5½ "	11.00	10.00	21.00	13.00	12.00	25.00	13
12.	Kaliachupra Sugar Mills Ltd., Mymensingh	-	June 1970	-	15.12	13.88	29.00	15.12	13.88	29.00	29
		Total :			115.21	97.61	212.82	129.97	109.07	239.84	145

APPENDIX – V(A) contd.

1	2	3	4	5	6	7	8	9	10	11	
	STEEL AND ENGINEERING INDUSTRY:										
1.	Khulna Shipyard Ltd., Khulna	Oct. 1953	Nov. 1957	4 yrs	8.49	4.50	12.99	13.42	8.00	21.42	2
2.	Dockyard and Engg. Works Ltd., Narayanganj	June 1950	June 1954	4 "	8.00	4.00	12.00	10.00	5.00	15.00	
3.	Chittagong Steel Mills, Chittagong	Oct. 1962	Jan. 1967	4½ "	99.66	171.11	270.77	150.00	170.00	320.00	16
4.	Expansion of Chittagong Steel Mills, Chittagong	Dec. 1965	June 1970	4½ "	32.98	46.28	79.26	33.00	50.00	83.00	3
5.	Bangladesh Diesel Plant, Dhaka	Dec. 1966	Dec. 1970	4 "	7.00	8.50	15.50	9.00	9.00	18.00	
6.	Eastern Cables (Electrical Wire Cable Mfg. Plant), Chittagong	Oct. 1966	June 1970	3½ "	15.00	10.00	25.00	18.20	12.59	30.79	1
7.	Dry Dock, Narayanganj	April 1965	June 1970	5 "	3.71	1.26	4.97	8.00	2.00	10.00	1
8.	Bangladesh Machine Tools Factory Phase-I, Joydevpur, Dhaka	–	June 1970	–	90.28	90.63	180.91	90.28	90.63	180.91	8
	Total :				265.12	336.28	601.40	331.90	347.22	679.12	34
	CHEMICAL, FERTILIZER AND PHARMACEUTICAL INDUSTRY:										
1.	Natural Gas Fertiliser Factory Ltd., Sylhet	Aug. 1957	June 1961	4 yrs	53.70	105.70	159.40	109.20	115.40	224.60	18
2.	DDT Factory, Chittagong	Sept. 1962	June 1967	4½ "	1.16	8.51	9.67	7.00	5.00	12.00	
3.	Polythene Bag Mfg. Plant at Natural Gas Fertiliser Factory, Fenchuganj, Sylhet	July 1962	June 1966	4 "	0.15	0.20	0.35	0.15	0.20	0.35	
4.	Triple Superphosphate Plant-1, Chittagong	March 1964	Aug. 1969	5½ "	9.00	7.50	16.50	10.06	8.74	18.80	1

APPENDIX - V(A) Contd.

1	2	3	4	5	6	7	8	9	10	11
5.	Ammonium Sulphate Plant, Fenchuganj, Sylhet	May 1966	June 1970	4 yrs	1.00	2.50	3.50	1.00	2.50	3.50
6.	Urea Fertilizer Factory, Ghorasal, Dhaka	Jan. 1964	June 1969	6½ "	105.00	139.00	244.00	108.96	154.40	263.36
7.	Karnaphuli Paper Mills Ltd., Chittagong	Sept. 1950	Sept. 1953	3 "	35.00	15.00	50.00	35.00	16.20	51.20
8.	Khulna Newsprint Mills Ltd., Khulna	Oct. 1956	Dec. 1959	3 "	34.30	80.70	115.00	43.30	91.70	135.00
9.	Expansion of Khulna Newsprint Mills Ltd., Khulna	Feb. 1961	April 1965	4 "	27.00	13.00	40.00	27.00	13.00	40.00
10.	Khulna Hardboard Mills Ltd., Khulna	Oct. 1964	May 1966	2 "	3.10	6.90	10.00	6.04	10.08	16.12
11.	North Bengal Paper Mills, Paksey, Pabna	Oct. 1963	June 1970	6½ "	29.84	48.16	78.00	77.31	59.59	136.90
	Total :				129.24	163.76	293.00	88.65	190.57	379.22

Sources: (i) East Pakistan Industrial Development Corporation (E.P.I.D.C.), Progress E.P.I.D.C., Dacca;

(ii) E.P.I.D.C., E.P.I.D.C. At Work, 1952-70, E.P.I.D.C., Dacca, 1970 and

(iii) E.P.I.D.C., E.P.I.D.C. in Figures, Public Relations Department, E.P.I.D.

APPENDIX - V(B)

Important Data on 14 (Fourteen) Industrial Enterprises Set-up during the Period, June 19

(I

Sl. No.	Names of Selected Enterprises (Industry-wise)	Date of Commencing Construction of the enterprises	Date of Commencing Commercial Production	Gestation Period (years)	Original Estimates			Revised Estimates		
					Local Currency	Foreign Exchange Components	Total	Local Currency	Foreign Exchange Components	Total
1	2	3	4	5	6	7	8	9	10	11
	JUTE									
1.	Furat-Karnaphuli Carpet Factory, Rangunia, Chittagong	Jan. 1978	May 1980	2½ yrs	52.52	78.85	131.37	124.40	97.47	221.87
2.	Bagdad-Dhaka Carpet Factory, Chittagong	Jan. 1978	June 1980	2½ "	51.25	90.88	142.13	125.28	96.63	221.91
	Total :				103.77	169.73	273.50	249.68	194.10	443.78
	COTTON									
3.	Kishorganj Textile Mills Ltd.	June 1974	June 1978	4 yrs	30.35	25.30	55.65	44.41	45.59	90.00
4.	Barisal Textile Mills Ltd.	July 1974	Sept. 1978	4½ "	40.30	34.50	74.80	66.39	49.61	116.00
5.	Dinajpur Textile Mills Ltd.	July 1974	May 1978	4 "	29.37	25.00	54.37	12.42	51.06	113.48
6.	Rajshahi Textile Mills Ltd.	July 1974	Dec. 1978	4½ "	39.22	34.50	73.72	67.66	49.90	117.56
7.	Monnoo Textile Mills Ltd., Dhaka	April 1978	Dec. 1980	3 "	22.61	37.77	60.38	34.46	39.15	73.61
8.	Darwani Textile Mills Ltd., Rangpur	Feb. 1977	June 1981	3½ "	53.78	55.20	108.98	105.67	58.78	164.45
	Total :				215.63	212.27	427.90	381.04	294.09	675.10

APPENDIX – V(B) Contd.

1	2	3	4	5	6	7	8	9	10	11	1
	SUGAR										
9.	Modern Backery, Dhaka	Jan. 1975	Sept. 1978	3½ yrs	18.13	7.33	25.46	28.88	26.28	55.16	29
10.	Can Making and Tin Printing Plant	Jan. 1976	Dec. 1981	6 "	1.42	1.87	3.29	1.42	1.87	3.29	9
11.	Cold Storage, Dhaka	Jan. 1976	June 1982	6½ "	2.57	1.39	3.96	2.57	1.39	3.96	7
	Total :				22.12	10.59	32.71	32.87	29.54	62.41	47
	STEEL										
12.	General Electric Mfg. Plant, Chittagong	Jan. 1972	July 1977	5½ yrs	144.63	74.91	219.54	239.22	131.87	371.09	30
	CHEMICAL										
13.	Ashuganj Fertilizer and Chemical Co. Ltd., Dhaka	Sept. 1975	Sept. 1980	5 yrs	1287.50	1874.10	3161.60	2645.40	3345.80	5991.20	
14.	Bangladesh Insulator Sanitary Ware and Tiles Factory (without Tiles), Dhaka	July 1975	Sept. 1980	5 "	133.50	74.50	208.00	190.60	78.90	269.50	24
	Total :				1421.00	1948.60	3369.60	2836.00	3424.70	6260.70	3

Sources: (1) Project Proformas of the Enterprises and (ii) Statistics and Official Records and Development Divisions of the Corporations – B.J.M.C., B.T.M.C., B.S.F.I.C., B.C.I.C. for the Period, 1972 to 1982.

APPENDIX - VI(A)

Average Scores of Each of the Independent Variables (Based on Likert' Five Points Scales) and Average Ratios of Each of the Dependent Varia

Variables / Selected Industries (N = 5)		X (Independent Variables)						
		Capital Expenditure Decisions and Control				Working Capital Decision		
		CER	CS	CEP	CEC	WCR	ID	ARD
		V1	V2	V3	V4	V5	V6	V7
BJMC	1	2.50	2.50	2.75	1.75	3.00	3.50	2.50
BEMC	2	2.50	2.50	2.75	3.00	4.25	4.00	1.25
BSFIC	3	3.50	2.50	3.50	3.00	4.50	4.00	2.00
BSEC	4	3.00	2.25	2.50	2.25	4.25	3.50	2.75
BCIC	5	3.00	2.00	2.25	1.75	3.50	3.00	2.50
	ΣX =	14.50	11.75	13.75	11.75	19.50	18.00	11.00

APPENDIX - VI(A) contd.

Variables / Selected Industries (N = 5)		X (Independent Variables)							Y (Dependent
		Profit Decisions and Control				Created Variables			Profitability
		ST/SP	PC	OE	PT	CEPC	WCDC	FDC	ROS
						V1 to V4	V5 to V10	V11 to V14	
		V11	V12	V13	V14	V15	V16	V17	V18
BJMC	1	3.50	2.00	3.25	2.50	9.50	18.25	11.25	(12.35)
BDMC	2	3.00	4.25	4.50	3.00	10.75	20.00	14.75	2.35
BSFIC	3	3.50	4.00	4.00	4.00	12.50	21.75	15.50	13.59
BSEC	4	3.75	4.25	3.75	3.75	10.00	17.50	15.50	5.99
BCIC	5	3.75	2.50	3.00	2.50	9.00	16.75	11.75	(8.07)
	$\Sigma X =$	17.50	17.00	18.50	15.75	51.75	94.25	68.75	$\Sigma Y =$ 1.51

Source: For Independent Variables, Based on the Responses of the Samples as pe vide, Appendix - VIII Part-B (No. 15 to 18), Part-C (No. 15 to 20) and and For Dependent Variables, Based on the Appendix- III.

APPENDIX – VI(B)

Pearson's Coefficient of Correlation (r) Values

X (Independent Variables)	Y (Dependent Variables)					
	V18 (ROS)		V19 (ROC)		V20 (ROI)	
	r	t	r	t	r	t
V1	0.68	1.62	0.75	1.95	0.79	2.27
V2	0.30	0.55	– 0.40	0.75	0.19	0.32
V3	0.64	1.46	0.04	0.07	0.62	1.37
V4	0.83	2.60	0.52	1.04	0.82	2.47
V5	0.96	6.00	0.63	1.40	0.92	4.07
V6	0.67	1.58	– 0.07	0.13	0.58	1.23
V7	– 0.31	0.59	0.40	0.75	– 0.28	0.50
V8	0.61	1.32	0.02	0.03	0.73	1.85
V9	– 0.13	0.22	– 0.79	2.22	– 0.18	0.32
V10	0.26	0.45	– 0.36	0.67	0.32	0.58
V11	– 0.13	0.23	– 0.17	0.28	– 0.05	0.09
V12	0.88	3.21	0.56	1.17	0.79	2.22
V13	0.69	1.65	0.05	0.09	0.58	1.23
V14	0.95	5.29	0.75	1.95	0.91	3.82
V15	0.86	2.93	0.26	0.45	0.86	2.93
V16	0.69	1.65	– 0.04	0.07	0.68	1.61
V17	0.95	5.45	0.64	1.46	0.88	3.21

[Source: Based on Appendix – VI(A).]

APPENDIX - VII

Correlation between use of Accounting Information in Financial Decisions and Control Variables and Performance Scales (Three Profitability Indexes)

'r' between	Pearson's Correlation Coefficients (r)	Calculated Value of 't'	Tabulated value of 't' at .10 = 2.353; at .05 = 3.182
Capital Expenditure Decisions and Control Variables:			
1. Use of Accounting Information in Capital Expenditure Requirements (CER) Decision and Return on Sales (ROS)	0.68	1.62	
Use of Accounting Information in Capital Expenditure Requirements Decision and Return on Capital Employed (ROC)	0.75	1.95	
Use of Accounting Information in Capital Expenditure Requirements Decision and Return on Investment (ROI)	0.79	2.27	
2. Use of Accounting Information in Capital Structure (CS) Decision and ROS	0.30	0.55	
Use of Accounting Information in Capital Structure Decision and ROC	- 0.40	0.75	
Use of Accounting Information in Capital Structure Decision and ROI	0.19	0.32	
3. Use of Accounting Information in Capital Expenditure Financing (CEF) Decision and ROS	0.64	1.46	
Use of Accounting Information in Capital Expenditure Financing Decision and ROC	0.04	0.07	
Use of Accounting Information in Capital Expenditure Financing Decision and ROI	0.62	1.37	
4. Use of Accounting Information in Capital Expenditure Control (CEC) and ROS	0.83	2.60*	
Use of Accounting Information in Capital Expenditure Control and ROC	0.52	1.04	
Use of Accounting Information in Capital Expenditure Control and ROI	0.82	2.47*	

APPENDIX - VII (Contd.)

'r' between	Pearson's Correlation Coefficients (r)	Calculated Value of 't'	Tabulated value of 't' at .10 = 2.353 at .05 = 3.182
Working Capital Decisions and Control Variables:			
5. Use of Accounting Information in Working Capital Requirements (WCR) Decision and ROS	0.96	6.00**	
Use of Accounting Information in Working Capital Requirements Decision and ROC	0.63	1.40	
Use of Accounting Information in Working Capital Requirements Decision and ROI	0.92	4.07**	
6. Use of Accounting Information in Inventory Decision (ID) and ROS	0.67	1.58	
Use of Accounting Information in Inventory Decision and ROC	-0.07	0.13	
Use of Accounting Information in Inventory Decision and ROI	0.58	1.23	
7. Use of Accounting Information in Accounts Receivable Decision (ARD) and ROS	-0.31	0.59	
Use of Accounting Information in Accounts Receivable Decision and ROC	0.40	0.75	
Use of Accounting Information in Accounts Receivable Decision and ROI	-0.28	0.50	
8. Use of Accounting Information in Cash Decision (CD) and ROS	0.61	1.32	
Use of Accounting Information in Cash Decision and ROC	0.02	0.03	
Use of Accounting Information in Cash Decision and ROI	0.73	1.85	
9. Use of Accounting Information in Working Capital Financing (WCF) Decision and ROS	-0.13	0.22	
Use of Accounting Information in Working Capital Financing Decision and ROC	-0.79	2.22	
Use of Accounting Information in Working Capital Financing Decision and ROI	-0.18	0.32	

APPENDIX - VII (Contd.)

'r' between	Pearson's Correlation Coefficient (r)	Calculated Value of 't'	Tabulated value of 't' at .10 = 2.353 at .05 = 3.182
10. Use of Accounting Information in Working Capital Control (WCC) and ROS	0.26	0.45	
Use of Accounting Information in Working Capital Control and ROC	-0.36	0.67	
Use of Accounting Information in Working Capital Control and ROI	0.32	0.58	
Profit Decisions and Control Variables:			
11. Use of Accounting Information in Deciding Sales Target and Selling Price (ST/SP) and ROS	-0.13	0.23	
Use of Accounting Information in Deciding Sales Target and Selling Price, and ROC	-0.17	0.28	
Use of Accounting Information in Deciding Sales Target and Selling Price, and ROI	-0.05	0.09	
12. Use of Accounting Information in Cost of Production (CP) Decision and ROS	0.99	3.21**	
Use of Accounting Information in Cost of Production Decision and ROC	0.56	1.17	
Use of Accounting Information in Cost of Production Decision and ROI	0.79	2.22	
13. Use of Accounting Information in Deciding Operating Expenses (OE) and ROS	0.69	1.65	
Use of Accounting Information in Deciding Operating Expenses and ROC	0.05	0.09	
Use of Accounting Information in Deciding Operating Expenses and ROI	0.58	1.23	
14. Use of Accounting Information in Deciding Profit Target (PT) and ROS	0.95	5.29**	
Use of Accounting Information in Deciding Profit Target and ROC	0.75	1.95	
Use of Accounting Information in Deciding Profit Target and ROI	0.91	3.82**	

APPENDIX - VII (Contd.)

'r' between	Pearson's Correlation Coefficient (r)	Calculated Value of 't'	Tabulated value of 't' at .10 = 2.353 at .05 = 3.182
Created Variables:			
15. Use of Accounting Information in Capital Expenditure Decisions and Control (CEDC) (Combined Variables from 1 to 4) and ROS	0.86	2.93*	
Use of Accounting Information in Capital Expenditure Decisions and Control, and ROC	0.26	0.45	
Use of Accounting Information in Capital Expenditure Decisions and Control, and ROI	0.86	2.93*	
16. Use of Accounting Information in Working Capital Decisions and Control (WCDC) (Combined Variables from 6 to 10) and ROS	0.69	1.65	
Use of Accounting Information in Working Capital Decisions and Control, and ROC	-0.04	0.07	
Use of Accounting Information in Working Capital Decisions and Control, and ROI	0.68	1.61	
17. Use of Accounting Information in Profit Decisions and Control (PDC) (Combined Variables from 11 to 14) and ROS	0.95	5.45**	
Use of Accounting Information in Profit Decisions and Control and ROC	0.64	1.46	
Use of Accounting Information in Profit Decisions and Control, and ROI	0.88	3.21**	

[Note: Significance Level:

* Significant at P < .10 (90 per cent level of confidence)

** Significant at P < .05 (95 per cent level of confidence)]

[Source: Based on Appendix - VI(B)]

APPENDIX - VIII

LETTER OF INTRODUCTION ACCOMPANYING THE QUESTIONNAIRE

FROM:

DR. A.H.M. HABIBUR RAHMAN
PROFESSOR OF FINANCE
and
DEAN, FACULTY OF COMMERCE
UNIVERSITY OF DHAKA
DHAKA-2.

Dear Sir,

Subject: Management Use of Accounting Information in Financial Decisions and Control, A Research Investigation.

I have the pleasure to introduce to you Mr. Muhammad Loqman, Assistant Professor of Accounting, University of Chittagong who is working as a Ph.D. Research Fellow of University Grants Commission under my supervision on the topic entitled "Management Use of Accounting Information in Financial Decisions and Control of Nationalised Industries in Bangladesh". This is purely an academic research which is likely to have far-reaching implications for the management of our nationalised industries.

Mr. Loqman is now collecting your valued opinion through a questionnaire attached herewith. I assure you that information supplied by you in this connection will be kept strictly confidential and used by him for the purpose of his study only. I should be grateful if he is extended all possible cooperation in getting the questionnaire duly filled in. The success of his efforts depends on your sincere cooperation.

Thanking you so much.

Yours sincerely,

Sd/-
(Dr. A.H.M. Habibur Rahman)

To

. . . . . .
. . . . . .
. . . . . .

QUESTIONNAIRE

PART – A
(General)

CONFIDENTIAL

(N.B.: Information furnished by the respondents will be kept strictly confidential and will be used for the purpose of this academic research only)

Name and Address of the Corporation : . . . . . .

Corporation Chairmen/Accounts Chiefs/Finance Directors/MIS Chiefs/ Planning and Development Chiefs.

Name and Address of the Enterprise: . . . . . .

. . . . . .

Enterprise Heads/Accounts Chiefs.

1. Why does management use accounting information in your organization ?

2. What are the sources of accounting information in your organization ?

3. What are the broad categories of management uses of accounting information ?

4. (a) Does accounting information in your organization serve as the measuring criteria ? Yes/No

   (b) If so, in what areas ?

5. How do you view the accounting system in your organization ?

6. For what types of decision and control areas, accounting information is used ?

7. (a) Do you think that financial statements, reports, budgets, etc., prepared are properly used by the respective authorities ? Yes/No

   (b) If so, in what areas ?

8. What are the various sources of non-accounting information ?

9. For what types of decision and control areas, non-accounting information is used ?

10. (a) Does your Management Information System (MIS) Division/Section perform its functions properly ? Yes/No

    (b) If so, what are those functions ?

    (c) If not, what are the problems ?

11. What types of deficiencies or shortcomings in the existing MIS affect management use of accounting information in financial decisions and control ?

12. What is your time lag between preparation and final publication of financial statements and reports ?

13. What should be the proper criteria for assessing the performances of your industrial organization ?

14. What, in your opinion, are the main purposes of preparing financial statements and reports ?

15. What, in your opinion, are the problems hindering management use of accounting information in your organisation ?

PART - B

"Capital Expenditure Decisions and Control, especially in Relation to the Use of Accounting Information"

1. Do you treat pre-construction expenditure, construction expenditure, plant and machinery, and other relevant costs for the programmes like Balancing, Modernization and Replacement (BMR), New Projects, Expansion, Quality Improvement, New Products, Cost Reduction, etc., as capital expenditure ?

Yes/No

2. What various stages do you follow in capital expenditure decision process ?

3. What problems do you face at various capital expenditure decision stages ?

4. In what important areas do you take capital expenditure decisions in your organisation ?

5. (a) Do you use accounting information for reaching such decisions ? Yes/No

(b) If so, what types of accounting information are used for the purpose ?

6. (a) Do you use non-accounting information in arriving at such decisions ? Yes/No

(b) If so, what types of non-accounting information are used for the purpose ?

7. Which techniques do you apply for evaluation of capital expenditure required for New Projects, BMR and Expansion Programme ?

8. Do you apply budgetary control technique ? Yes/No

9. What types of forms and reports are used for controlling capital expenditure ?

10. What factors or bases are considered in deciding the capital expenditure requirements in your organization ?

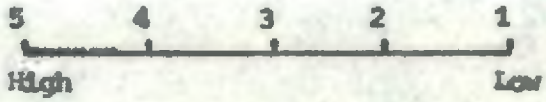
11. What, in your opinion, are the reasons for revision of capital expenditure requirements in your organization ?

12. What bases or factors are considered in deciding the capital structure (debt-equity ratio) of your organization ?

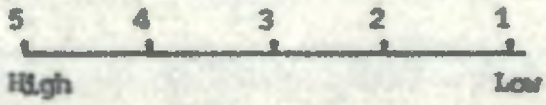
13. What bases or factors are considered in deciding the sources for financing capital expenditure in your organisation ?

14. What techniques do you apply for controlling capital expenditure of the projects – New, EMR or Expansion ?

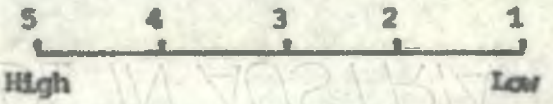
15. To what extent do you use accounting information in deciding capital expenditure requirements ? (Please tick) :



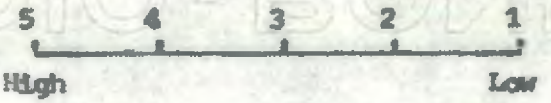
16. To what extent do you use accounting information in deciding capital structure ? (Please tick) :



17. To what extent do you use accounting information in capital expenditure financing decision ? (Please tick) :



18. To what extent do you use accounting information in controlling your capital expenditure ? (Please tick) :



PART – C

"Working Capital Decisions and Control, especially in Relation to the Use of Accounting Information".

1. What are the important short-term financial (a) objectives and (b) policies of your organisation ?

2. What factors or bases are considered in deciding the working capital requirements ?

3. How do you test the adequacy of your working capital requirements ?

4. What factors or bases are considered in deciding the size of inventory ?

5. What methods or techniques are followed for inventory control ?

6. How do you test the adequacy of the size of inventory ?

7. How do you estimate or decide the size of accounts receivables and what factors or bases are considered in this respect ?

8. What methods do you follow for control and evaluation of accounts receivables (or credit and collection policies) ?

9. How do you test the adequacy of the size of accounts receivables ?

10. What factors or bases are considered in deciding the cash requirements ?

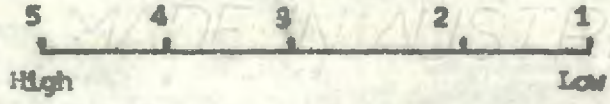
11. What methods do you follow in cash control and evaluation ?

12. What are the sources for financing the working capital of your organization ?

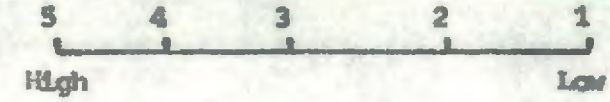
13. What bases or factors are considered in deciding the sources for financing working capital requirements ?

14. What techniques are applied for controlling working capital of your organization ?

15. To what extent do you use accounting information in deciding working capital requirements ? (Please tick) :

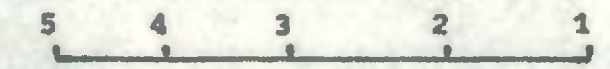


16. To what extent do you use accounting information in inventory decision ? (Please tick) :



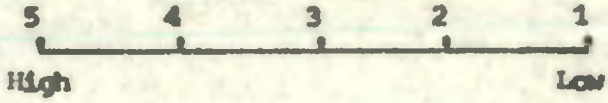
17. To what extent do you use accounting information in deciding accounts receivable ? (Please tick) :

18. To what extent do you use accounting information in deciding cash requirements ? (Please tick) :



19. To what extent do you use accounting information in working capital financing decision ? (Please tick) :

20. To what extent do you use accounting information in controlling your working capital ? (Please tick) :



PART - D

"Profit Decisions and Control, especially in Relation to the Use of Accounting Information"

1. Who are the authorities involved in deciding the profit targets ?

2. What factors or bases are considered in deciding the profit targets ?

3. What objectives do you keep in your mind while deciding the profit targets of your organisation ?

4. What tools are used for profit decisions and control ?

5. What types of schedules are used for purpose of profit decisions ?

6. What, in your opinion, are the drawbacks involved in fixation of profit targets by the concerned authorities ?

7. What factors or bases are taken into account while deciding cost of production ?

8. What factors or bases are considered in estimating operating expenses of your organization ?

9. What factors or bases do you consider in deciding sales targets of your organization ?

10. Who are the authorities involved in deciding the price of your products ?

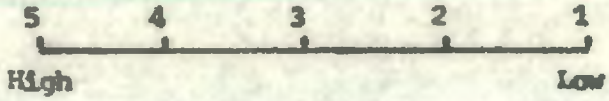
11. What factors are considered for fixing the price of your products ?

12. What are the broad objectives of your present pricing policies ?

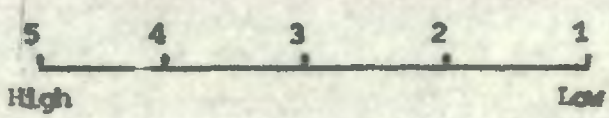
13. What, in your opinion, are the problems of price fixation by the concerned authorities ?

14. To what extent do you use accounting information in deciding sales target and selling price ? (Please tick) :

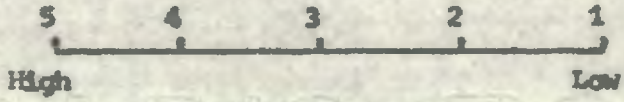
15. To what extent do you use accounting information in ascertaining cost of production ? (Please tick) :



16. To what extent do you use accounting information in estimating operating expenses ? (Please tick) :



17. To what extent do you use accounting information in fixing profit targets ? (Please tick) :



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