

MANAGEMENT ACCOUNTING DEVELOPMENT AND PRACTICES IN BANGLADESH

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ABSTRACT

The more the development of the market economy, the more the significance of management accounting. To keep pace with this increasing market economy, it becomes imperative for the organizations to adopt new management accounting tools and techniques. It is also important for the Bangladeshi organizations. This paper seeks to obtain an overview of the management accounting practices in the listed manufacturing companies of Bangladesh. Data has been gathered by a questionnaire survey from eight manufacturing sectors. The analysis has revealed that though there is difference in extent of practices among the sectors, all sectors fail to practice some newly developed techniques. If this trend continues, Bangladeshi organizations will lag behind in the race of global competitiveness and comparative advantages. It is therefore, some policy recommendation has been made to improve and fasten the management accounting practices.

Key words: Management accounting, Manufacturing company, Bangladesh.

I. INTRODUCTION

Management accounting practice helps an organization to survive in the competitive, ever-changing world, because it provides an important competitive advantage for an organization that guides managerial action, motivates behaviors, supports and creates the cultural values necessary to achieve an organization's strategic objectives.

Management accounting is concerned primarily with the internal needs of management. It is oriented toward evaluation of performance and development of estimates of the future as opposed to traditional financial accounting which emphasizes historical data related to such legal

financial matters as ownership, investment, credit granting, taxation, regulation, and the building of foundations for consistent and conservative external reporting, "in accordance with generally accepted accounting principles." Flexibility is an essential characteristic of management accounting since it presupposes that careful attention has been given to determine the important needs of management, many of which cannot be precisely identified in advance.

The Institute of Management Accountants (IMA), the professional association of practicing and academic management accountants, defines management accounting as:

“The process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by management to plan, evaluate, and control within an organization and to assure appropriate use of and accountability for its resources. Management accounting also comprises the preparation of financial reports for non-management groups such as shareholders, creditors, regulatory agencies, and tax authorities.”

Management accounting provides information from its environment to management to facilitate decision-making. Good management accounting information has three attributes: Technical-it enhances the understanding of the phenomena measured and provides relevant information for strategic decisions, Behavioral-it encourages actions that are consistent with an organization's strategic objectives, Cultural-it supports and/or creates a set of shared cultural values, beliefs, and mindsets in an organization and society.

The development of management accounting is responsive to the demands of management and the environment. Management accounting adapts to organizational change and three major forces cause organizations to evolve: technological change, globalization, and customer needs (Ma Watters, 2001) [1]. In order to remain competitive in today's global market, business must continually improve. Good management accounting practices help the organization to improve continually. Due to these all over the world there are so many management accounting tools & techniques developed and practiced. Bangladeshi organizations as a member of global market need to adopt these techniques in order to remain competitive. A survey has been conducted based on a questionnaire to examine the management accounting practices in the manufacturing sector of Bangladesh. The all over evolution of management accounting system and its development in Bangladesh is also examined in order to provide a better understanding of present practices.

II. MANAGEMENT ACCOUNTING DEVELOPMENT

Management accounting is not new in any sense of the world. The origins of modern management accounting can be traced to the emergence of managed, hierarchical enterprises in the early

nineteenth century (Johnson and Kaplan, 1987) [2]. The Industrial Revolution in the early nineteenth century resulted in the emergence of a factory system that dramatically changed the production process (Ashton, D., Hopper, T. and Scapens, R.W. 1991) [3]. This has created a new demand for accounting information. Market information, which had automatically provided details of materials and piecework labor costs incurred in meeting each customer's order, was no longer available. In particular, information was required to determine the cost of the internal operations and also to measure the efficiency of converting materials leading to the finished product (Parker, 2002) [4].

Johnson and Kaplan (1987) [2] suggest that, notwithstanding the impact of the Industrial Revolution, the emergence and rapid growth of railways in the mid-nineteenth century was the major driving force in the development of management accounting systems. New measures such as cost per ton-mile, cost per passenger mile and the ratio of operating expenses to revenues were created and reported on a segmental and regional basis. Many of the innovative management accounting measures developed by railway companies were subsequently absorbed and developed by the other business sectors.

During the nineteenth century the development of so-called scientific management has made further advances in management accounting. The scientific management experts developed new cost accounting procedures to evaluate and control physical and financial efficiency of tasks and processes in complex machine-making firms and to assess the overall profitability of the enterprise (Johnson and Kaplan, 1987) [2]. At about the same time as scientific managers were refining their techniques for determining standard, articles advocating the use of standards for cost control were published (Longmuir, 1902 [5.I]; Garry, 1903 [5.II]; Whitmore, 1908 [5.III]) [5]. According to Solomons (1965) [6], in 1911 G. Charter Harrison designed and installed the first standard costing systems. In 1918 Harrison published the first set of equations for the analysis of cost variances. Another pioneer of standard costing Harrington Emerson in a series of articles in the Engineering Magazine of 1908 and 1909 advocated the development of accounting information systems specifically directed towards the achievement of efficiency objectives. Emerson was possibly the first writer to stress that information on standards

permits managers to differentiate variances that are due to controllable conditions and variances that are caused by conditions beyond management's control.

In the early decades of the twentieth century a merger wave in the USA resulted in the emergence of giant vertically integrated and multi-divisional organizations. These multi-activity firms developed a centralized unitary organizational structure where the firm's operations were broken down into separate divisions, each with highly specialized activities. New management accounting techniques were devised to support these multi-activity, diversified organizations (Russell, K.A., Siegel, G.H. & Kulesza, C.S., 1999) [7]. Budgetary planning and control systems were developed to ensure that the diverse activities of different divisions were in harmony with overall corporate goals. In addition, a measure of return on investment (ROI) was devised to measure the success of each division and the entire organization. The diversity of product markets and the scale and complexity of the production processes within these new multi-activity firms created enormous information processing problems. It made it extremely difficult for corporate top management to function efficiently and effectively in all the markets served by their organizations (Russell, K.A., Siegel, G.H. & Kulesza, C.S., 1999) [7]. The solution to this problem was further decentralization and the creation of investment centers. Systems of transfer prices were subsequently devised that sought to provide a fair basis for allocating profits between divisions (Boer, 2000) [8].

The debate about direct costing can be viewed as the most significant event of the 1950's. The level of significance of this debate can be judge by the number of articles, book, and research studies published on this topic from 1950 through to 1959. A review of the listings under the title "direct cost" in the Accountants Index for these years show 144 publications for the decade. The stage for a discussion of direct cost was set by two papers published in the 1930's: Harris (1936) [9] in a paper entitled "What Did We Earn Last Month?" explored how to compute net income under different inventory costing methods, and Kohl (1937) [10] in his paper "What is Wrong with Most Profit and Loss Statements?" argued that all fixed costs should be excluded from product costs. Although these papers appeared well before 1950,

they put the case for direct costing that was so heavily debated by accountants during that decade.

More than 30 popular cost and management accounting techniques have been introduced, since 1950. According to Smith (1999) [11], the major developments in management accounting since 1950s can be explained as follows:

- Cost and management accounting innovations in 1950s can be identified as: Discount cash flows, Total quality management, Cusum charts and Optimum transfer pricing.
- Cost and management accounting innovations in 1960s can be identified as: Computer technology, Opportunity cost budgeting, Zero-base budgeting, Decision tree, Critical path scheduling, and Management by objectives.
- Cost and management accounting innovations in 1970s can be identified as: Information economics and agency theory, Just-in-time scheduling, Strategic business units, Experience curves, portfolio management, Materials resource planning, Diversification, Matrix organization and Product repositioning.
- Cost and management accounting innovations in 1980s can be identified as: Activity based costing, Target costing, Value-added management, Theory of constraints, Vertical integration, Private labels and Benchmarking.
- Cost and management accounting innovations in 1990s can be identified as: Business process reengineering, Quality functional deployment, Outsourcing, Gainsharing, Core competencies, Time-based competition and Learning organization.

Reviewing cost and management accounting innovations of the last two decades, Björnenak, T., & Olson, O. (1999) [12] identify the major recently developed cost and management accounting techniques in the literature as follows: "activity based costing (ABC); activity management (AM); and activity based management (ABM); local information system (LS); balanced scorecard (BS); life cycle costing (LCC) and target costing (TC); strategic management accounting (SMA).

III. BACKGROUND OF MANAGEMENT ACCOUNTING IN BANGLADESH

The change in management accounting practices in Bangladesh dates back to the early 1976s, when the Bangladesh government undertook its privatization program. The privatization program implemented in Bangladesh since 1976 have brought significant growth in its GDP and in individual personal savings. This should be an added impetus for the much needed development of an accounting profession.

Bangladesh inherited an economy dominated by the private sector, after the liberation in 1971. The new government was committed to socialism and nationalizing heavy industries and as a consequences they included all abandoned property within programs of state ownership of industry, agricultural self-sufficiency, import substitution, and industrialization based on state intervention and central planning (Government of Bangladesh, 1972) [13]. By 1974, the public sector controlled about 350 state owned companies (SOEs) responsible for over 92% of total fixed assets of the industrial sector. However, their inefficiency adversely affected public investment and their losses consumed 30% of annual project aid. Not surprisingly, this strengthened the hand of adversaries of the public sector (Ghafur, 1976) [14].

Public sector control problems had created a response of privatization polices in Bangladesh. A common research finding is that accounting controls become irrelevant in state owned enterprises (SOEs) because political influences over decisions outweigh commercial considerations and by pass formal accountability systems (Jones and Sefianc, 1992) [15]. Several studies of Bangladesh SOEs found bureaucratic rule-bound controls were maintained but largely ignored because decisions were politicized (Uddin and Hopper, 2001 [16.I]; Hoque and Hopper, 1997 [16.II]; Alam, 1997 [16.III]). Technically sound accounting systems operated within centralized state planning but were irrelevant for managers as they bore little semblance to operational realities. Accounting appeared to exist to legitimate state activities to external aid agencies by demonstrating the appearance, rather than the substance, of financial accountability and rational economic planning. Not surprisingly, there was widespread

managerial dissatisfaction with controls, which was reflected in poor enterprise performance.

In late 1975s a new government came to power, assuming full control in 1977. This government initiated liberal economic policies leading to some small (Bengali-owned) companies being returned to their owners. A disinvestments board was established resulting in 255 SOEs, including “abandoned” and vested properties, being divested or privatized between 1975 and 1981 (World Bank Reports, 1995) [17]. Advocates of privatization presume that ownership changes will induce superior management controls, and hence greater productive and allocative efficiency (Vickers and Yarrow, 1988) [18]. World Bank reports (1995) [17] justifying privatization emphasize the lack of financial accountability and transparency in SOEs, and their immunity from market disciplines and the scrutiny of legal institutions. World Bank reports (1995) [18] and the IMF emphasize the importance of creating an “Enabling Environment” in Bangladesh to promote accountability, transparency and efficiency in companies.

As Bangladesh moves from nationalization to privatization of business enterprise to realize efficiency, government interference has been restrained and the government’s sphere of actions and decision-making authority are limited mostly to the macro economy. The adoption of the scientific management system by the privatized organizations to ensure efficiency has created an environment to motivate and facilitate the use of management accounting. The growth and change of decision-making authority and level from the government to the enterprise has been the most important factor that has created the demand for practicing management accountants in Bangladesh.

As a consequence in 1977 “The Institute of Cost and Management Accountants of Bangladesh” (ICMAB) was formed by the ordinance known as “Cost and Management Accountants Ordinance, 1977 (Ordinance No. LIII of 1977)”. The Institute was a branch of “Pakistan Institute of Industrial Accountants” set up in Dhaka in 1961. After the independence it was renamed as “Bangladesh Institute of Industrial Accountants” in 1972. Activities of the institute are regulated by the “Cost and Management Accountants Regulations, 1980”. It is an autonomous body under the Ministry of

Commerce, Govt. of the People's Republic of Bangladesh. This is the only institute in the country dedicated to cost and management education and research. The cost and management accounting profession in Bangladesh is mainly controlled by this body whose structures are modeled on "the United Kingdom system" (Parry and Grooves, 1990) [19]. ICMAB also prides itself in advising the government on various issues relating to national budget, company law, VAT, taxation, privatization etc. on its own initiative and through representation in different committees of the government.

In Bangladesh until 1994 there was no statutory enactment as to maintenance of cost accounting records of any sort and audit thereof by manufacturing companies. Two sections have been provided in the Companies Act, 1994 requiring certain companies to maintain specific cost accounting records and audit of the same as and when desired by the government. So long, as there was no statutory obligation regarding maintenance of specific cost accounting records and audit of the same, companies particularly manufacturing companies are maintaining their cost accounting records to suit the purposes and requirements of their internal management and the requirements of their external financial audit by chartered accountants.

Section 220 of Companies Act 1994 speaks about cost audit of records, maintained under section 181 (1) (d) of the Act. Gazette Notification/ Government order dated 11.12.2001 having number Commerce Ministry PTM/AP/17/87/397 made it mandatory for mills under Bangladesh Sugar and Food Industries Corporation and for all Public Limited Companies, required to maintain cost accounting records as per the above stated section. The report is to be prepared and submitted in accordance with Cost Audit (Report) Rules (1997). In line with the above Gazette Notification the government issued another order dated 26.12.2002 to do cost audit in 5 companies of fuel and power sector and in 6 companies of Jute sector. In pursuant to the above Government orders all the mills of Bangladesh Sugar and Food Industries Corporation (BSFIC) have already brought under cost audit. Some other companies as specified in the order-dated 26.12.2002 had also completed cost audit of its cost books for one or more years.

IV. OBJECTIVE OF THE STUDY:

The specific objectives of this study are:

1. To obtain a broad overview of the management accounting practices in Bangladeshi listed manufacturing companies.
2. To make policy recommendations on how to improve the practices of management accounting in manufacturing sector in Bangladesh.

V. RESEARCH METHODOLOGY

Data was gathered principally through administration of questionnaire to finance and management staffs of listed companies. Sample size is selected based on different manufacturing sectors. There are 8 listed companies in cement, 4 in ceramics, 37 in Food & Allied, 4 in Jute, 8 in Paper and Printing, 26 in Pharmaceuticals and Chemicals, 8 in Tannery and 42 firms in textile. A random selection was made consisting of 50 companies, 5 from cement, 4 from ceramics, 8 from Food & Allied, 4 from Jute, 5 from Paper and Printing, 10 from Pharmaceuticals and Chemicals, 4 from Tannery and 10 from textile. As most of the surveys only sampled from few firms of each sector, our analysis are limited to description. It is admitted that this exploratory study has certain limitations. First, the surveys only sampled from few firms of each sector, our analysis are limited to description. Secondly, it is recognized that the comparatively low number of responses to our questionnaire survey may have caused a bias. Thirdly, several important aspects of management accounting systems were excluded from the questionnaire in order to get a comparative results among the sectors.

VI. FINDINGS OF THE STUDY

This section presents the findings of survey results in six tables. Each table contents a distinct topic area: cost accounting system design, short-run decision making, capital budgeting decisions, operational budgeting, operational control and management control.

Cost Accounting System Design

Table 1 includes six aspects of the design of cost accounting systems. Several differences among different sectors of manufacturing industries are

apparent. As shown in Panel A Food and Allied sector incurs the most direct materials and least manufacturing overhead cost. On the other hand Tannery and Pharmaceuticals & Chemicals incur the highest proportion of direct labor and manufacturing overhead cost respectively. In respect of product costing principle (Panel B) a huge proportion of industries irrespective of sectors use full cost system. Some of the firms of Ceramic, Food & Allied, Pharmaceuticals, Tannery and Textile use both variable and full costing. No firms use throughput and life cycle costing. It is also true for Target costing except few firms of Textile sector.

Due to the difference in nature of operation different sector uses different cost accumulation systems. None of the sector use job order costing method for cost accumulation except Paper & Printing. All the firms of Cement and Pharmaceuticals & Chemicals including some firms of Food and Allied, Jute, Paper & Printing industry use process-costing method for cost accumulation. Firms under Ceramic and Tannery industry use only operational costing. Operational costing is also used by Food and Allied, Jute, Paper & Printing and Textile sector to some extent.

In allocating manufacturing overhead proportionally more firms under Cement, Jute, Paper & Printing and Tannery do not distinguish between fixed and variable component. However larger percentage of Ceramic, Pharmaceuticals & Chemicals and Textile differentiate between fixed and variable component. It seems that firms under acute competitive industries make the above difference (Panel D). All sectors have diversity of practice in the aggregation of overhead cost pool, but it is worth mentioning that all industry more frequently use overhead rate for each cost center (Panel E). Most of the time industries in all sector report using machine hours for allocation of overhead, but direct labor cost is also a popular basis for such allocation. It is rare for industries to use volume of production and weight as a basis for overhead allocation.

Short-term Decision Making

The only item common to the survey of different sectors is in the use of cost-volume-profit (CVP) analysis. As shown in table 2, a higher percentage of firms in all sectors use the basic linear deterministic model as opposed more sophisticated probabilistic or non-linear models. However, few firms in Food & Allied, Jute, Paper & Printing, Tannery, and Textile do not use CVP model at all.

Table 1. Cost Accounting System Design

Panel A. Manufacturing Cost Structure

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Direct Materials	53%	48%	68%	42%	43%	45%	38%	37%
Direct Labor	18%	23%	15%	33%	34%	20%	40%	35%
Manufacturing Overhead	29%	29%	17%	25%	23%	35%	22%	28%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Panel B. Product Costing Principles

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Full Cost	80%	25%	50%	100%	80%	30%	75%	20%
Variable/Direct Cost	20%	25%	12.5%	N/A	20%	20%	N/A	20%
Variable and Full cost	N/A*	50%	37.5%	N/A	N/A	50%	25%	40%
Throughput Costing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Target Costing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20%
Life Cycle Costing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* Not Applicable

Panel C. Product Costing Methods

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Job Order Costing	N/A	N/A	N/A	N/A	40%	N/A	N/A	N/A
Process Costing	100%	N/A	75%	50%	20%	100%	N/A	40%
Operational Costing	N/A	100%	25%	50%	40%	N/A	100%	60%
Activity Based Costing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Panel D. Distinguish Between Fixed and Variable Overhead Costs

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Yes	20%	75%	50%	N/A	20%	70%	25%	80%
No	80%	25%	50%	100%	80%	30%	75%	20%

Panel E. Degree of Aggregation in Overhead Rate Calculation

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Total Plant Wide Rate/ Blanket Rate	80%	25%	75%	100%	80%	20%	75%	30%
Overhead Rate for Groups of Cost Centers	40%	75%	62.5%	25%	N/A	40%	50%	40%
Overhead Rate for Each Machine	40%	N/A	12.5%	25%	40%	70%	N/A	50%
Overhead Rate for Each Cost Center	80%	75%	75%	50%	60%	90%	50%	90%

Panel F. Overhead Allocation Bases

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Direct Labor Costs	20%	25%	37.5%	75%	20%	40%	50%	80%
Machine Hours	80%	75%	75%	50%	80%	80%	75%	70%
Direct Labor Hours	40%	25%	25%	N/A	20%	30%	25%	50%
Direct Material Cost	20%	N/A	25%	75%	N/A	20%	N/A	40%
Volume of Production	N/A	N/A	N/A	N/A	N/A	N/A	25%	30%
Weight	20%	N/A	50%	N/A	N/A	N/A	N/A	N/A
Direct/Prime Costs	N/A	25%	37.5%	N/A	N/A	60%	50%	60%
Other Basis	N/A	25%	N/A	50%	40%	50%	25%	N/A

Table 2. Short-term Decision Making

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Use Deterministic Linear CVP	80%	75%	62.5%	50%	60%	60%	50%	50%
Use Probabilistic or Non-Linear CVP	20%	25%	25%	N/A	20%	40%	25%	30%
CVP Not Used	N/A	N/A	12.5%	50%	20%	N/A	25%	20%

Capital Budgeting Decisions

Table 3 shows that majority of the firms in all sectors use discounted cash flow models such as net present value or internal rate of return for capital budgeting decisions. Few firms in all sectors except ceramic and jute also use pay back period method for long-term investment decision.

Operational Budgeting

As the survey has been conducted regarding only two aspects of operational budgeting, Table 4 includes two panels. As shown in Panel A, director- finance and accounts is very often the responsible person for operational budgeting in Cement, Ceramic, Jute, Pharmaceuticals & Chemicals, and Textile, whereas managing director is very often responsible in Food & Allied, Paper & Printing and Tannery. The sectors are very similar in respect of revision of their operational budget. There are no firms among the sectors that do not revise the operational budgets. All firms under the study at least revise their operational budgets once in a year. Semi-annual revision of operational budgets is also very common, but very few firms revise their operational budgets as needed (Panel B).

Operational Control

Majority of the firms in all sectors use actual costs (Table 5, Panel A). The most important purpose of using standard costing is cost control in all sectors except jute. In the Jute sector standard costing is

primarily used for budgeting. In all the sectors, standard costing is least likely used for bookkeeping. (Table 5, Panel B). Panel C suggests that though within the sectors the firms are diverse regarding the tightness of standard costs, among the sectors there are some similarities. No firms in all the sectors tend to set standard based on ideal standard. Some firms in all the sectors set standards based on average past performance and normal standard. The uses of other types of standards are not very common. Sectors under the survey are also very identical in respect of frequency of review of standard costs. Majority of the firms in all sectors except jute review the standard costs annually. In case of Jute industry, majority of the firms review standard costs every few years. Few firms in Pharmaceuticals & Chemicals and Textile review the standard costs when materials and technology changes (Panel D).

Management Control

An important area of management control is the measures that are used for performance evaluation. Table 6 indicates that among the non-financial performance measures, sales are commonly used in all sectors. Sales growth is another frequent used non-financial measure in all sectors except Jute. Among the financial performance measures, return on investment, and return on assets are two prominent performance measures used by firms in all the sectors. Return on sales is also common among the sectors but not prominent one. Residual income is merely used by firms in Ceramic, Pharmaceuticals & Chemicals and Textile sectors.

Table 3. Capital Budgeting Decisions

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Net Present Value (NPV)	80%	75%	50%	75%	80%	90%	50%	80%
Average Rate of Return	N/A	25%	25%	N/A	20%	50%	N/A	40%
Internal Rate of Return (IRR)	60%	50%	75%	25%	60%	80%	25%	80%
Simple Rate of Return	N/A	N/A	12.5%	N/A	N/A	N/A	N/A	20%
Cost Benefit	80%	50%	N/A	N/A	20%	30%	N/A	40%
Urgency Method	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NPV and IRR	40%	50%	37.5%	N/A	40%	70%	25%	60%
Pay Back Period	20%	N/A	25%	N/A	40%	50%	25%	50%
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 4. Operational Budgeting

Panel A. Persons in Charge of the Operational Budgeting System

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Director-Finance & Account	80%	75%	25%	75%	40%	80%	25%	60%
Controller-Accounts	N/A	25%	N/A	N/A	N/A	10%	25%	20%
Managing Director	20%	N/A	75%	25%	60%	N/A	50%	20%
Other	N/A	N/A	N/A	N/A	N/A	10%	N/A	N/A

Panel B. Frequency of Revision of the Operational Budget

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Not Revised	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monthly	20%	N/A	12.5%	N/A	N/A	30%	N/A	20%
Quarterly	60%	50%	37.5%	N/A	25%	60%	25%	40%
Semi-annually	80%	75%	75%	50%	50%	80%	75%	60%
Annually	100%	100%	100%	100%	100%	100%	100%	100%
As Needed	40%	25%	25%	N/A	25%	40%	N/A	50%
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 5. Operational Control

Panel A. Use of Standard Costing Systems

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Actual Cost	60%	50%	50%	75%	60%	60%	75%	50%
Standard Cost	40%	50%	37.5%	25%	40%	30%	25%	30%
Other	N/A	N/A	12.5%	N/A	N/A	10%	N/A	20%

Panel B. Purpose of Standard Costing

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Budgeting	4.2	4.25	4.0	1.5	4.2	4.1	2.75	3.5
Pricing	3.0	3.0	2.625	2.0	3.2	3.1	2.75	2.4
Cost Control	1.6	1.5	1.875	2.5	1.6	1.8	1.25	1.8
Performance Evaluation	1.8	2.0	2.25	4.25	2.8	2.5	4.5	2.9
Inventory Valuation	4.6	4.5	4.75	5.0	4	4.4	4	5.0
Bookkeeping	5.8	5.75	5.625	5.75	5.2	5.1	5.75	5.5

*: 1= Most Important and 6 = Least Important

Panel C. Target Levels of Standard Costs

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Ideal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average Past Performance	20%	25%	37.5%	75%	20%	30%	50%	20%
Currently Available	N/A	25%	12.5%	N/A	20%	20%	N/A	40%
Normal Standard	40%	50%	37.5%	25%	40%	40%	25%	30%
Expected Actual	20%	N/A	12.5%	N/A	N/A	N/A	N/A	10%
Estimated	20%	N/A	N/A	N/A	20%	10%	25%	N/A
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Panel D. Frequency of Review of Standard Costs

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Monthly	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Quarterly	N/A	N/A	N/A	N/A	N/A	20%	N/A	10%
Semi-annually	20%	25%	37.5%	N/A	40%	30%	N/A	40%
Annually	60%	75%	62.5%	25%	40%	40%	75%	30%
Continuously	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Every Few Years	N/A	N/A	N/A	75%	N/A	N/A	25%	N/A
Whenever Materials or Technology Change	N/A	N/A	N/A	N/A	N/A	10%	N/A	10%
When Variance Indicates a Problem	20%	N/A	N/A	N/A	20%	N/A	N/A	10%
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 6. Management Control

	Cement	Ceramic	Food & Allied	Jute	Paper & Printing	Phar. & Chemicals	Tannery	Textile
Sales								
Sales Growth	80%	50%	75%	25%	40%	80%	50%	50%
Market Share	40%	75%	50%	N/A	60%	70%	25%	60%
Asset Turnover	20%	N/A	37.5%	N/A	40%	50%	N/A	40%
Profit Minus Corporate Costs	N/A	N/A	25%	25%	20%	40%	N/A	N/A
Return on Sales	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Return on Investment	20%	25%	25%	50%	60%	40%	25%	60%
Return on Assets	60%	75%	75%	75%	60%	100%	75%	90%
Controllable Profit	40%	50%	62.5%	50%	80%	70%	25%	70%
Residual Income	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manufacturing Costs	N/A	25%	N/A	N/A	N/A	60%	N/A	30%
Other	N/A	N/A	N/A	50%	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

VII. RECOMMENDATIONS

To enhance the management accounting practices and to gain competitiveness of the Bangladeshi companies the following recommendations have been made after analyzing all major and associated findings-

1. Higher percentage of labor in Jute, Paper & Printing, Tannery and Textile sectors implies that the factory is not automated enough. So, automation is recommended in order to reduce production costs and to increase profitability.
2. A higher percentage of firms in all sectors use absorption or full costing principle for product costing but absorption costing is not useful for internal decision-making. So it is suggested to use variable costing for internal decision making.
3. Throughput costing and target costing should be used to increase the competitiveness of the

firms within the industry and in the global market.

4. A larger percentage of firms in Cement, Food and Allied, Jute, Paper & Printing and Tannery do not distinguish between fixed and variable overhead costs, which sometimes lead to misleading decision. It is recommended to make proper distinction between fixed and variable portion of manufacturing overhead.
5. As the factories are not automated to a larger extent, it will be appropriate to use direct labor hours as overhead allocation basis instead of machine hours.
6. Some of the firms do not use CVP for short-term decision-making. It will be helpful to use CVP to analyze break-even, margin of safety and to increase profitability.
7. It is suggested to assign operational budgetary systems to the controller or director- finance and accounts instead of managing director

because managing director may not have enough expertise in this area.

8. Frequency of revision of operational budget should be increased to evaluate efficiencies of the operational level managers and control costs.
9. Instead of actual costing, firms are suggested to use standard costing because variances are buried within costs when actual costing is used. If standard costing is used individual variance can be helpful for performance evaluation and initiate cost reduction program.
10. Standards are usually set based on average past performance but past is not always the reflection of future as future is always uncertain. So, it is suggested to set standards based on expected actual or estimation of future circumstances.
11. Very few firms review standard costs when materials or technology changes or variances indicates problem. It is recommended to review standard costs under above situations unless standard costs will become absolute and performance evaluation will not make sense.
12. Very few firms use residual income as a performance indicator but from the goal congruence perspective it is beneficial to use residual income instead of return on investment. So it is suggested to use residual income to evaluate departmental performance.

VIII. CONCLUSION

Globalisation and the increasing complexity of business, together with high-powered computing technology, have contributed to the development of new management accounting techniques all over the world. The present study shows that though privatization and authoritative pronouncement has contributed a lot in the development of management accounting in Bangladesh, the survey result of the present practices of management accounting in listed manufacturing sector reveals that state of use of sophisticated techniques (like target costing, throughput costing, life cycle costing and probabilistic CVP) is not satisfactory.

To keep pace with the world changing management accounting environment, Bangladeshi firms should use the newly developed techniques. A well-balanced practice of those techniques irrespective

of the sectors may be enhanced through compulsory enactment of cost and management accounting audit in Bangladesh.

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