STRATEGIC MANAGEMENT ACCOUNTING TECHNIQUES OF MANUFACTURING ORGANIZATIONS OF BANGLADESH WITH SPECIAL REFERENCE TO SATISFACTION LEVEL

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Abstract: Different types of business strategy and a number of sophisticated strategy-based techniques have emerged to support and meet the challenges of global competition and customer satisfaction. As a manufacturing organization’s business strategies, such as strategic pattern, strategic mission, and strategic positioning are different, the satisfaction levels of various Strategic Management Accounting Techniques (SMAT) can vary accordingly. This study discussed the degree of similarity and variances of these in listed manufacturing organizations in Bangladesh. Research question of the study is whether relationships between the satisfaction levels of different SMAT and different types of strategic pattern, vision, mission and positioning in listed manufacturing organizations of Bangladesh have been prevailing? Secondary data were collected from 100 listed companies between August and October, 2016. For statistical analysis we used ANOVA test. Out of 16 types of SMAT, none of the techniques found satisfied, few of the techniques are in neutral positions, and most of these are in dissatisfic levels. Study found that the SMAT varies between countries due to economical and cultural differences. Authors found that there is no difference in satisfaction level of different types of SMA techniques identified by the authors based on a previous study. Studics also found that there is significant difference in strategic mission and strategic positioning at 95% confidence interval, respectively.

Keywords: SMAT, Business strategy, Satisfaction level

Introduction
It is argued that the traditional approaches of managerial accounting have limited evidence of financial performance improvement in response to the major changes in manufacturing technology in the past three decades. Consequently there was a need for developing a management accounting project oriented towards the strategic accounting rather than the management control process. Some of the strategic initiatives techniques are activity based costing/management, attribute costing, benchmarking, competitive positioning, monitoring, competitor cost assessment, competitor performance appraisal on public financial statements, customer accounting, integrated performance management systems, life cycle costing, quality costing, strategic costing, strategic pricing, target

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costing, and value chain costing. Cardes and Gooneratne (2016) depicted that the role of management accounting team is to provide required costing information to the top management monthly to re-evaluate their existing decisions and make new decisions about product costing, pricing, and continuing and discontinuing product lines by considering profitability.

Since the mid-1980s, criticisms about the current state of management accounting practices were widely publicised in the professional and academic literature. The principle criticisms of conventional management accounting practices can be summarised as it does not meet the needs of today’s competitive and technological environment; traditional product costing systems provide misleading information for decision-making purposes; they have become subservient to financial requirements and focuses almost entirely on internal activities, whereas very little attention is given to the external environment in which the business operates (Drury, 1992). Consequently, there is a need for developing a management accounting project oriented towards strategic accounting rather than the management control process. The generally acknowledged father of SMA is Simmonds as he was the first to coin the term (Simmonds, 1981).

Ramljak and Rogoši (2012) argued that the fundamental purpose of strategic management accounting that is providing a broad scope of relevant and timely information, is fulfilled. It was hypothesized that the synergistic effect of the different strategic management accounting techniques implementation has a positive impact on cost control and reduction.

Business strategy is a long-term plan of action designed to achieve a particular goal or set of goals or objectives. There are three types of business strategy: strategic pattern, strategic mission and strategic positioning. Strategic pattern is the approach taken by a functional area to achieve corporate and business unit objectives and strategies by maximizing resource productivity. It is concerned with developing, and nurturing a distinctive competence to provide a company or business unit with a competitive advantage. Strategic mission describes the organization’s basic function in society, in terms of the products and services it produces for its customers. Azevedo and Ribeiro (2013) depicted that new business models add value in the value chain. Strategic positioning is closely related to market segment focus. Strategy positioning involves creating a unique, consistent, and recognized customer perception about an organization’s offering and image.

Research Question

Whether relationships between the satisfaction levels of different SMAT and different types of strategic pattern, mission and positioning in listed manufacturing organizations of Bangladesh have been prevailing?

Literature Review

Miles and Snow (1978) consider that management has to face three types of problems: the entrepreneurial (the strategic management of product and markets), the technological (the production and distribution of products) and the administrative (the organization to
support the entrepreneurial and technical decisions). When these problems are solved in a successful manner, a stable strategic pattern is identified. Along this path, three typologies are shown according to their rate of change in product or market. Prospectors compete primarily through product innovation, offer a wide product range and are considered pioneers in the product and market area.

Gupta and Govindarajan (1984) shown a life cycle approach using the concept of strategic mission (or portfolio strategy). According to the life cycle stage in which the market and product match each other, the company will prefer one mission to another. Gupta and Govindarajan described four strategic missions depending on the balance between the objectives of market-share growth and short-run profit maximisation. Build mission aims to increase market share and competitive position, even at the expense of short-term earnings and cash flow. At the opposite end, harvest mission aims to maximise short-term earnings and cash flow rather than improve market share. Hold mission found itself in the middle between the previous configurations and divest strategy implies the choice to end the activity. Porter (1985) distinguishes three generic strategies that allow the company to achieve a sustainable competitive advantage. Cost leadership strategy implies obtaining the lowest cost compared to competitors; it is possible by exploiting the economies of scale and scope and achieving superior technology that yields a low cost. Differentiation strategy focused on offering products that are perceived by customers to be unique. This is possible by offering superior quality, customer service and brand image. The sources of this advantage could be: brand loyalty, product design, after-sale services and retail facilities. Focused strategy implied competing in a specific market segment through either cost leadership or differentiation. Techniques qualifying as “SMA” should exhibit degrees of one or more of the following orientations: competitor focus (Bromwich, 1988), marketing focus (Simmonds, 1981) and future focus (Wilson, 1991). Employing these criteria, Guilding et al. (2000) identified 12 SMAT. These are: attribute costing, brand value budgeting and monitoring, competitor cost assessment, competitive position monitoring, competitor appraisal based on published financial statements, life cycle costing, quality costing, strategic costing, strategic pricing, target costing, and value chain costing.

In a subsequent work, Cravens and Guilding (2001) included further three techniques: activity-based costing, benchmarking and integrated performance measurement. Guilding and McManus (2002) noted that customer accounting can also be viewed as constituting a strategic management accounting practice (see also Ward, 1992; Hoque, 2001, Cadez, 2002). Guilding and McManus investigated the incidence of four elements of customer accounting. These are: customer profitability analysis, customer segment profitability analysis, lifetime customer profitability analysis, and valuation of customers or customer groups as assets. This signifies that the incidence of 19 SMA practices has been appraised in the literature.

Investigation of these 19 techniques followed their prior description in the literature. While noting that this provides some validation for the selection of techniques investigated, Guilding et al. (2000) note that it does not preclude the possibility of the scope and focus of one SMA technique overlapping with one another. The view has been
taken in this study that brand value budgeting and brand monitoring are sufficiently related techniques that they can be collapsed into one technique which has been labelled “brand valuation”. For the same reason, customer profitability analysis and customer segment profitability analysis have been collapsed into one technique which has been labelled “customer profitability analysis”. The view has also been taken that activity-based costing does not qualify as an SMA technique. Departing from the position taken by Cooper and Kaplan (1988), it is felt that activity-based costing is more concerned with costing accuracy rather than the adoption of a strategic-orientation.

Most of the literatures regarding strategic management accounting were at the conceptual levels. In recent years, such approaches have influenced research conducted around the factors affecting SMA techniques implementation (Cravens & Guilding, 2001; Guilding et al., 2000; Cadez, 2006, Cadez and Guiding, 2007,2008; Imeokparia, 2008, Cinquini and Tenucci, 2010.), confirming the increasing interest on the assessment of the extension of their use within companies and the factors affecting it.

The companies of the general sector concentrate on using actual cost. They also tend to operate the activity based costing system as a real alternative to solve the problem of allocating the indirect manufacturing costs (Katrib and Rahman, 2014). Management have reservations in applying SMAT in decision making. It recommended that accountants and senior Management staff expand the scope by including other techniques not being applied currently (Michael, 2016).

**Attribute costing:** This SMA technique is concerned with costing the benefits that products provide to customers (Roslender and Hart, 2003). Bromwich (1990) sees these benefits as constituting the ultimate cost drivers. The customer (external) orientation highlights why attribute costing may be considered as an example of SMA.

**Benchmarking:** This technique focuses on a search for best practice. It involves a continuous comparative process that can be applied to all areas of an organization’s activities, including strategic development, operations and customer service (Brownlie, 1999). There are various types of benchmarking (Elnathan et al, 1996; Hoque, 2001) where by best practice is usually an ideal provided by sources external to the company, or another high performing division within a company.

**Brand valuation:** This technique assigns financial value to the equity associated with the name or image of a brand (Cravens and Guilding, 1999). A formalization of brand value accounting can underscore the view that brand-related expenditure should be viewed as an investment rather than an expense, thus highlighting the future and long-term oriented focus of this technique. This dimension of brand valuation can be considered in the context of Tayles et al.’s (2002) promotion of SMA as an approach to appraising investment in other intangibles such as intellectual capital.

**Competitive position monitoring:** Simmonds (1986) talks of competitive position as an asset with finite earning potential. As part of competitive position assessment, Simmonds suggests that trends with respect to sales, market share, volume, profit, unit cost, and cash flow should be appraised when formulating strategy. Although Simmonds noted that
accounting is still a long way from being able to quantitatively express an organization’s competitive position in a single-figure, Rangone (1997) describes an analytical framework that results in a single-figure denominated quantitative assessment of an organization’s competitive standing.

**Competitor cost assessment:** This technique can be distinguished from competitive position monitoring due to its specific concentration on the cost structures of competitors. Advocates of this technique (Simmonds, 1981; Jones, 1988; Bromwich, 1990; Ward, 1992) argue that an assessment of a key competitor’s relative cost position can yield an enhanced appreciation of an organization’s strategic decision making environment.

**Competitor performance appraisal:** Strategic performance and key sources of competitive advantage can be assessed by applying an appropriately conducted analysis of competitors’ published financial statements. This analytical technique by investigating and interpreting the accounts of two UK retailers. *Moon* and *Bates* (1993)

**Customer profitability analysis:** This appears to be most widely-discussed customer-focused accounting technique. Commentaries have been provided by Shapiro et al. (1987), Bellis-Jones (1989), Ward (1992) and Connoly and Ashworth (1994). The technique is concerned with tracing customer-specific costs and sales to individual customer accounts (*Guilding* and *McManus*, 2002).

**Integrated performance measurement:** Integrative performance measurement systems provide financial and non-financial performance measures that cut across a range of organizational perspectives. When combined together, “these measures provide a way of translating strategy into a coherent set of performance measures” (*Chenhall*, 2005, p.396). This SMA technique can be seen to be closely related to the balanced scorecard that has been popularized largely through the writings of *Kaplan* and *Norton* (1992; 1996a; 1996b).

**Life cycle costing:** Rather than appraising cost on the somewhat arbitrary temporal basis of a year, life cycle costing promotes the view of classifying costs according to the stages that comprise a product’s life (*Czyzewski* and *Hull*, 1991; *Shields* and *Young*, 1991; *Wilson*, 1991). The advocates of this technique argue that it can provide a useful counter to short-term management tendencies.

**Lifetime customer profitability analysis:** This approach moves beyond computing the annual profit that will be generated from a particular customer, to considering all future projected profits that will result from a trading relationship with a particular customer (*Guilding* and *McManus*, 2002). The use of profitability analysis over multiple years is motivated by marketing practitioners’ common observation that customer profitability changes with the length of the trading relationship (*Foster* and *Gupta*, 1994; *Jacob*, 1994).

**Quality costing:** Belohlav (1993) argues that “a common denominator in many discussions on competitiveness and strategy is the issue of quality”. Typically, quality costs are classified into four categories: prevention, appraisal, internal failure, and external failure (*Kaplan* and *Atkinson*, 1989; *Albright* and *Roth*, 1992). Today, in many firms, quality is typically defined in terms of customer satisfaction. Consistent with this
view, the model proposed by Heagy (1991) places the customer into the equation of quality costs by including the cost of lost sales due to poor quality in the measurement process.

Strategic costing or strategic cost management: Contrary to the traditional cost analysis, assessing the financial impact of alternative managerial decisions, Shank and Govindarajan (1988; 1992; 1993; Shank, 1996) provide a framework where cost data is used to develop superior strategies in order to gain a competitive advantage. This technique recognizes concepts from strategic management (e.g. value chain) and marketing (e.g. product positioning) as most relevant in strategic decision making, thus highlighting an external and future focus.

Strategic pricing: Simmonds (1982) uses a case study to demonstrate that pricing decisions based on a conventional internally-oriented and historically-based analysis can result in sub-optimality. In his view, the data used in making pricing decisions should be supplemented with information regarding possible competitor reactions to any proposed change in pricing policy. Another case study is used by Rickwood et al. (1990) to illustrate a similar perspective.

Target costing: An approach that supports cost reduction initiatives at the point of new product development or design (Monden and Hamada, 1991). The target cost is the full product cost that is aspired to. It is derived from estimates of selling volume, price and desired profit (Cooper and Slagmulder, 1999). The approach involves determining a target price that will provide the desired market share, and then a target cost is determined in order to provide the total product profit level sought (Shank and Fisher, 1999).

Valuation of customers as assets: In the marketing literature, it appears common place to conceive of customers as assets (Levitt, 1983; Srivastava et al, 1998; Turchan and Mateus, 2001, Guilding and McManus, 2002). Given the importance of customer bases, Foster et al. (1996) propose that assessments of management performance should be supplemented by tracking how the value of customer bases change in time. Models of customer value are still in their infancy; however, an asset value could be developed by discounting to present value the estimated profits that will be generated by the trading relationship with a particular customer or group of customers (Guilding and McManus, 2002).

Value chain costing: Shank and Govindarajan (1992) developed a costing method that represents a management accounting operationalization of Porter’s (1985) value chain analysis. The focus of this technique is external to the firm as it involves viewing the organization as a link in the chain of all value-creating activities associated with the provision of a product or service. They demonstrate that traditional value added analysis can be seen to be somewhat narrow as it fails to consider any latent cost savings that lie unrealized in the firm’s linkages with its suppliers and customers.

Kaplan and Norton (1992) described that the balanced scorecard allows managers to look at the business from four important perspectives which is shown below:
Figure: 1 Balanced Score Card (Source: Kaplan and Norton, 1992)

Anna (2015) depicted that level of management tools utilization and possibilities influencing performance. The study indicates that there is a positive significant relationship between management tools and techniques utilization, and organizational performance.

According to Gao, Bao, Guo(2015) commented that to obtain a long-term competitive advantage for an enterprise, collecting internal and external information and making a reasonable strategic decision is crucial to obtain.

In the context of these prior studies, this study has investigated the satisfaction levels of 16 SMAT considering the following techniques: Attribute Costing, Life Cycle Costing, Quality Costing, Target Costing, Value Chain Costing, Benchmarking, Competitive position monitoring, Competitor cost assessment, Competitor performance appraisal based on published financial statements, Integrated performance measurement systems (Balanced Scorecard or non-financial indicators), Strategic Pricing, Strategic costing, Brand Valuation, Lifetime customer profitability analysis, Valuation of customer as assets, Customer Accounting. The study also tried to find out the relationship of satisfaction levels of SMAT with the strategic pattern, mission, positioning of listed manufacturing organizations from a Bangladesh perspective.

Objectives of the Study

- To determine the satisfaction level of different SMAT in various listed manufacturing organizations in Bangladesh.
• To examine the relationship between different strategic pattern, vision, mission and positioning with satisfaction level of different SMAT in various listed manufacturing organizations in Bangladesh.

• To provide implications of the study.

Methodology of the Study

The target population for the purpose of the study is different types of listed manufacturing organizations of Bangladesh. In this study, a total of 100 listed manufacturing organizations were surveyed between August and October 2016.

Table-1: Sample size and sample unit

<table>
<thead>
<tr>
<th>Types of manufacturing organizations</th>
<th>No of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile companies</td>
<td>37</td>
</tr>
<tr>
<td>Pharmaceutical and chemical companies</td>
<td>23</td>
</tr>
<tr>
<td>Food and allied companies</td>
<td>30</td>
</tr>
<tr>
<td>Cement companies</td>
<td>5</td>
</tr>
<tr>
<td>Ceramic companies</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

(Source: Authors)

This study considered a hundred listed manufacturing organizations on a simple random basis in the area of Dhaka District. Because, in a simple random sample ('SRS') of a given size, all such subsets of the frame are given an equal probability. Based on the research questions, three hypotheses are developed and tested to show the positive or negative relationships between the satisfaction levels of different SMAT and different types of strategic pattern, strategic mission and strategic positioning by using one-way ANOVA test. Three alternative hypotheses formulated are stated below:

Hypothesis Testing

H_{A1}: There are differences in satisfaction level of different types of SMAT among different types of strategic patterns.

H_{A2}: There are differences in satisfaction level of different types of SMAT among different types of strategic missions.

H_{A3}: There are differences in satisfaction level of different types of SMAT among different types of strategic positioning.

Limitations of the Study

The study mentioned many strategic management accounting approaches, but in the methodology, the study did not properly define how in real life, companies can apply these approaches and how they found that. The paper mentioned the application of Likert scale, which might be fine for measuring "Satisfaction" as there is no way to use Lisrel software. As such, satisfaction level cannot be always applicable for measuring/quantifying accounting approaches.
Analysis of the Findings

To determine the satisfaction levels of different SMAT, the authors have applied mean analysis. Here, the authors have used 7-point Likert measurement scale where 1 denotes “Highly dissatisfied” and 7 denotes “Highly satisfied”. The following table shows that none of the techniques investigated are deemed satisfied, some are in neutral positions and most are in dissatisfied levels.

Table-2: Descriptive statistics of satisfaction level of SMA techniques

<table>
<thead>
<tr>
<th>No.</th>
<th>SMA techniques</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Attribute Costing</td>
<td>3.57</td>
</tr>
<tr>
<td>2</td>
<td>Life Cycle Costing</td>
<td>4.23</td>
</tr>
<tr>
<td>3</td>
<td>Quality Costing</td>
<td>4.31</td>
</tr>
<tr>
<td>4</td>
<td>Target Costing</td>
<td>3.82</td>
</tr>
<tr>
<td>5</td>
<td>Value Chain Costing</td>
<td>3.51</td>
</tr>
<tr>
<td>6</td>
<td>Benchmarking</td>
<td>3.77</td>
</tr>
<tr>
<td>7</td>
<td>Competitive position monitoring</td>
<td>3.82</td>
</tr>
<tr>
<td>8</td>
<td>Competitor cost assessment</td>
<td>4.08</td>
</tr>
<tr>
<td>9</td>
<td>Competitor performance appraisal based on published financial statements</td>
<td>4.34</td>
</tr>
<tr>
<td>10</td>
<td>Integrated performance measurement systems (Balanced Scorecard or non-financial indicators)</td>
<td>4.11</td>
</tr>
<tr>
<td>11</td>
<td>Strategic Pricing</td>
<td>3.97</td>
</tr>
<tr>
<td>12</td>
<td>Strategic costing</td>
<td>4.31</td>
</tr>
<tr>
<td>13</td>
<td>Brand Valuation</td>
<td>3.88</td>
</tr>
<tr>
<td>14</td>
<td>Lifetime customer profitability analysis</td>
<td>3.85</td>
</tr>
<tr>
<td>15</td>
<td>Valuation of customer as assets</td>
<td>2.94</td>
</tr>
<tr>
<td>16</td>
<td>Customer Accounting</td>
<td>2.85</td>
</tr>
</tbody>
</table>

(Source: Authors)

Total of 6 SMA techniques are in a neutral position, namely: life cycle costing, quality costing, competitor cost assessment, competitor performance appraisal based on published financial statements, integrated performance measurement systems and strategic costing. Moderately dissatisfied SMA techniques are: attribute costing, target costing, value chain costing, benchmarking, competitor position monitoring, strategic
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pricing, brand valuation, and lifetime customer profitability analysis. The rest of the techniques are in slightly dissatisfied levels such as valuation of customer as assets and customer accounting.

**Table-3: Relationship between the satisfaction level of SMA Techniques and Business strategy**

<table>
<thead>
<tr>
<th>Sl no.</th>
<th>Significance</th>
<th>Result</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H&lt;sub&gt;1&lt;/sub&gt;</td>
<td>.337</td>
<td>Reject</td>
<td>There is no difference between the satisfaction level of different types of SMA techniques and different types of strategic pattern of listed manufacturing organizations.</td>
</tr>
<tr>
<td>H&lt;sub&gt;2&lt;/sub&gt;</td>
<td>.037</td>
<td>Accept</td>
<td>There is difference between the satisfaction level of different types of SMA techniques and different types of strategic mission of listed manufacturing organizations.</td>
</tr>
<tr>
<td>H&lt;sub&gt;3&lt;/sub&gt;</td>
<td>.076</td>
<td>Accept</td>
<td>There is difference between the satisfaction level of different types of SMA techniques and different types of strategic positioning of listed manufacturing organizations.</td>
</tr>
</tbody>
</table>

(Source: Authors)

This table shows that there is no difference in satisfaction level of different types of SMA techniques among different types of strategic pattern. But there is difference in case of strategic mission at 95% level of confidence and in case of strategic positioning at 90% level of confidence.

**Conclusions and Implications:**

With greater competition in the manufacturing environment defined by cost, quality and time issues, there exists a prevalent conviction that conventional accounting-based measures of organizational performance are outdated. Hence, there are moves to adopt newer strategy based techniques due to greater needs to be more responsive to investor and customer needs. SMAT are linked to the issue of the need for external information to face the uncertainties of environment and to support strategic decisions. Among different types of SMA techniques, none of the techniques investigated are deemed satisfied, some are in neutral positions and most are in dissatisfied levels. Some types of SMAT vary in relation to different types of business strategy and some do not. It appears likely that systematic differences between the economies and socio Geo-Political, legal business environment, culture of countries contribute to differential use and satisfaction of different types of SMAT. However, we see that despite rejection there is no difference between the satisfaction level of different types of SMA techniques and different types of strategic pattern of listed manufacturing organizations, but there is a difference between the satisfaction level of different types of SMA techniques and different types of strategic mission of listed manufacturing organizations. Further, we observed that there is a difference between the satisfaction level of different types of SMA techniques and
different types of strategic positioning of listed manufacturing organizations. Different strategic management accounting techniques implementation has a positive impact on cost control and reduction.

As such, in future, causative factor of rejection of our findings, that there is no difference between the satisfaction level of different types of SMA techniques and different types of strategic pattern of listed manufacturing organizations, should be empirically tested. Further, based on the condition of economies and cultural difference among various countries and design of manufacturing organizations need to be included in future research work. In future researchers can design research methodology on how the real life companies apply SMAT approaches and how can they work. The application of Likert scale, which might be fine for measuring "Satisfaction", may not be appropriate for measuring/ quantifying accounting approaches for which alternative measures may be taken by the researchers. Also there is a need to do in –depth statistical analyses like reliability test, validity test, chi-square test and factor analysis.

References:


