

STRATEGIC MANAGEMENT ACCOUNTING INFORMATION ELEMENTS: MALAYSIAN EVIDENCE

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ABSTRACT

Motivated by the paucity of published empirical evidence on SMA this paper reports the results of an exploratory study carried out on Electrical and Electronics (E&E) companies operating in Malaysia. Specifically, it explores the extent of strategic management accounting (SMA) information elements usage among Malaysia's E&E companies. The results indicate that E&E companies use SMA information elements extensively. The results imply that companies are extending their management accounting information towards more externally focused and strategic material. This finding enriches our current knowledge about the extent of SMA information usage among organisations. It also supports the findings of several previous researches which suggested that companies operating in today's environment emphasise beyond traditional management accounting information.

Keywords: Strategic Management Accounting, competitor information, customer information, and market information

Background

Management accounting systems have long been recognised as an integral part of the information system and one of the most important sources of information in an organisation (Hopwood, 1972). They provide information that is used for organisations' various internal purposes, from decision making to a means for

organisational learning (Coad, 1996). Nevertheless, its ability to successfully fulfil contemporary company information requirements has been questioned (Hiromoto, 1988; Johnson and Kaplan, 1987; Kaplan, 1984). It is claimed that traditional management accounting information had failed to provide the information requirement for organisation's strategic purposes (Bromwich and Bhimani, 1989; Johnson and Kaplan, 1987; Roslender and Hart, 2003). This contention was based on the lack of ability of traditional management accounting to fulfil the information requirements that could contribute to organisations' competitiveness, and long-term performance (Hiromoto, 1991; Johnson and Kaplan, 1987; Kaplan, 1984).

Strategic management accounting (SMA) has not received much attention despite the fact that it was first coined in the early eighties (Simmonds, 1981). A review of the literature surrounding SMA revealed that the gaps in our understanding seem to be attributed to the various interpretations and conceptualisations of SMA put forth by its advocates. Some authors have claimed that SMA development is slow, ill defined, and exactly what constitutes SMA is tentative and unclear (Coad, 1996; Carr and Tomkins, 1996; Lord, 1996). In addition, little is known about organisations' usage of SMA information to identify whether the development is largely rhetorical. The current paper attempts to explore the level of SMA information usage among Malaysian Electrical and Electronics (E&E) companies. E&E industry was chosen as the target population due to its significant contribution to Malaysia's economy, and the level and dynamism of its competition. Responding to the previous anecdotal development of the elements of SMA the paper unravels the various SMA conceptualisations and its information elements.

The remaining sections of the paper will be organised as follows. The first section deals with developments in management accounting that leads to the needs for SMA information. We then focus on the conceptualisation of SMA by its commentators and the information elements contained within it. The next section presents the methodological aspects of the paper. In the final section the results and findings are presented followed by discussion of the implications of the work and a conclusion.

Development of Strategic Management Accounting

Management accounting is portrayed as a catalyst for achieving an organisation's overall objectives (Lowe, 1971; Otley, Broadbent and Berry, 1995; Ouchi, 1979). Exploring the relevance of management accounting towards organisations' long term success is therefore an important research agenda. This poses a fundamental question both for management accounting academics (theoretically) in developing or perhaps refining further the existing practice, and organisations (practically) in relation to management accounting system designs operating in today's competitive business environment. Otley (1994) has reiterated that the key goal of

contemporary organisations undoubtedly centres on the need for survival by adaptation and only those organisations which match their capabilities to the changing needs of the market place will survive in the long-term. For example, Mia and Clarke (1999) found that managers used management accounting information extensively under intensity of market competition that enable them to position themselves relative to their competitors, and adapt to their market via the assessment of product attributes, price, and costs of the substitute products. From this perspective, the use of management accounting information serves as a means for organisations to adapt to their environment through continuously evaluating the progress of their strategy.

For some time now it has been argued that globalisation has changed the business environment generally and competition in particular. Today's business environment is characterised by escalating competition, changing competitive strategy, and shorter product life cycles (Dent, 1996; Morrow, 1992). Manufacturing companies in particular, are pressured to find ways to more effectively balance the objectives of lower costs with improvement in quality while maintaining profitability (Adler, Everett and Waldron, 2000). Moreover, as a consequence of today's fierce competition companies adopt various customer oriented strategy in their quest for competitive advantage (Guilding and McManus, 2002). As an integral part of organisational control, this has implications and poses great challenges to management accounting in assisting strategic decision makers to effectively implement their strategy (Bromwich, 1990; Johnson and Kaplan, 1987; Roslender and Hart, 2003).

It appears from the literature that despite some important developments claimed to be pertinent to meet the current business environment, organisations continue to practice traditional management accounting system for their planning, control and decision making while only limited 'contemporary management accounting' is evidenced in practice (Abdul Rahman, Omar and Zainal Abidin, 2003; Chenhall and Langfield-Smith, 1998; Drury and Tayles, 1995; Guilding, et al., 2000; Sulaiman, Nik Ahmad and Alwi, 2004). This is despite researchers' concern about the ability of traditional management accounting system to provide the information requirements for contemporary managers (Bromwich and Bhimani, 1989; Bromwich, 1990; Hiromoto, 1988; Johnson and Kaplan, 1987; Kaplan, 1984; Roslender and Hart, 2003), and its negative impact on organisational long term performance (Hiromoto, 1991).

Management accounting should not be viewed in isolation, but rather within a broader aspect of organisational control measures (Chenhall, 2003). The control needs of the current environment are significantly different from those developed in earlier periods and improvements are urgently required (Nixon and Burns, 2005). There are calls for research which is interdisciplinary (Roslender and

Hart, 2003), has a marketing interface (Wilson, 1991; Roslender and Hart, 2002), accounts for strategic positioning (Roslender, 1995), and involves strategic management accounting (Simmonds, 1981; Bromwich, 1990) are among the various perspectives suggested to revitalise management accounting and present the information suitable to organisations' requirements.

Strategic management accounting (SMA) since being coined in the early eighties has been described as management accounting information that aids organisations in monitoring the success of their strategic pursuits (Simmonds, 1981). Simmonds in his series of writing (1981; 1982; 1986) had conceptually emphasised the requirements of management accounting information that enables an organisation to monitor the achievement of its strategy relative to their competitors in the market place. He maintained that sustainable competitiveness is an outcome of the organisation's ability to counter its core competitors' moves and thus there is a need for financial information about competitors. Rangone (1997) concurred that information about major competitors is crucial in fulfilling strategic goals and enhancing organisational effectiveness. It was suggested that organisation carried out a crude form of competitor analysis in their quest for competition in the market place which was not made apparent among researches (Collier and Gregory, 1995; Guilding, 1999; Palmer, 1992). This demonstrates the importance of competitor information in developing and monitoring an organisation's strategy and it needs considerable attention. Bromwich (1990) further broadened the concept to product market information. He argues that the importance of product attributes as a source of winning customers' in the product market and emphasises product life-cycle costing and attribute costing to create a competitive advantage. Looking from a marketing perspective, Roslender and Hart (2003) saw SMA's potential in aiding organisation's efforts towards their sustainable competitive advantage through brand value management and supporting strategic marketing efforts.

Despite the importance emphasised by its commentators, SMA development has not received great visibility in academic literature and empirical researches are sparse. This apparent gap may be attributable to the various conceptualisations given to SMA, the disjointed efforts to explore its overall development (e.g. looking at individual techniques such as target costing, life-cycle costing, attribute costing, etc.) and the broadness of the concept entailed by the subject (e.g. interface with marketing, operations, strategic management etc.).

To date, researches have been somewhat fragmented in nature, and this has shaped the development of our existing knowledge of the subject (Guilding and McManus, 2002; Guilding, Cravens and Tayles, 2000; Rickwood, Coates and Stacey, 1990). Generally, SMA has been conceptualised by its advocates as management accounting information that portrays externality (Simmonds, 1981; Bromwich, 1990), is marketing focused (Roslender and Hart, 2002; 2003; Wilson,

1991) and is long-term and future oriented (Wilson, 1991). Nonetheless, this broad categorisation is not without its problems, there may exist overlap, for example to a certain extent defining what information should be categorised and as which dimension. Competitor information may be claimed as portraying ‘externality’, whilst on the other hand it could also arguably fall under ‘marketing’ categorisation? This has contributed to the next problem of how SMA should be conceptualised and operationalised – as practices, as techniques, or as elements of SMA information? For example is it accounting for strategic management (SM-A) or is it a set of management accounting practices that display strategic orientation (S-MA)?

Whilst there are problems with the various ways that SMA could be conceptualised there is also uncertainty over how SMA and the extent of SMA adoption could be captured and measured. Guilding et al. (2000) developed their instrument to appraise the incidence and perceived merit of SMA in New Zealand, United Kingdom, and the United States. Based on the concepts advanced by earlier advocates they had conceptualised SMA as management accounting practices that portray one or more elements of environmental or marketing orientation, focus on competitors, and having a forward looking orientation. After exploratory factor analysis these were grouped into strategic costing and pricing, competitor accounting, and brand value accounting. They identified and distilled 12 practices that proxy the three SMA elements. For example, target costing (TC) was selected as one of the SMA practices because of its market driven philosophy embedded in it for continuous product development. TC is characterised by a forward-looking approach and is closely aligned to an organisation’s quest for competitive advantage. They found that SMA practices appraised are experiencing wide-ranging degrees of application amongst the three countries where competitor accounting and strategic pricing appear to be the most popular SMA practices. Moreover, the term ‘strategic management accounting’ was demonstrated as infrequently used, with limited appreciation of it by practising accountants.

One apparent implication arising from the Guilding et al. (2000) paper is that the precise ‘definition’ of the particular SMA practice and the particular use of the term is an important factor. For example, the term TC had its origins from Japanese corporations (Monden and Hamada, 1991) and might not be appreciated by non-Japanese corporations though the concepts embedded in TC might be practiced by non-Japanese corporations. But TC as one SMA practice could be unbundled into the certain elements representing its main essence. This paper attempts to address, and to avoid such problems with regards to using practices that are deemed to exhibit the elements of SMA as a proxy. Instead of using the terminology of techniques and providing a glossary this questionnaire was constructed based on the strategically related activities (or elements) that would be carried out as a basis for or a result of adoption of SMA.

Based on the aforementioned review, the conceptualisation of SMA information elements adopted in the current paper is presented in the following section.

The Elements of SMA Information

The term strategic itself has many interpretations. As a consequence, the use in the questionnaire of the elements of SMA information was preferred to building the questionnaire round techniques. This helps to avoid the risk of being wrongly perceived as seeking to be exhaustive and conclusive in the choice of SMA information advanced in this paper. Therefore, the elements of SMA information put forward were based on existing conceptual framework that were advocated by its commentators (e.g. Simmonds, 1981; Bromwich, 1990; Roslender, 1995).

The earliest writing on SMA was published by Simmonds in 1981 in a professional management accounting magazine. He conceptualised SMA as the provision and analysis of management accounting data about a business and its competitors used for developing and monitoring business strategy (Simmonds, 1981, p. 26). He explicitly highlighted the potential of management accounting in aiding organisation to sustain their competitiveness. Implicitly he argued for the need for management accounting to provide financial information that portrays an organisation's competitive position. He criticised the internal cost-volume-profit (CVP) as being inadequate for strategic purpose and called for externally focused management accounting that can aid managers in formulating and monitoring their organisation's strategy. Moreover, he emphasised the importance of learning about competitor information in dealing with organisation's strategic pursuit. Bromwich (1990, p. 28) extends the conceptualisation as the provision and analysis of financial information on the organisation's product markets and competitors' costs and cost structures and the monitoring of the organisation's strategies and those of its competitors in the market over a number of periods.

On the other hand, there were also calls for management accounting to be interfaced with strategic marketing and as a result SMA is portrayed as accounting for achieving competitive advantage – thus, organisation's MAS should provide information that enable organisations to track the progress of a chosen marketing strategy (Roslender and Hart, 2002; 2003; Ward, 1992). Another perspective that could be part of SMA development calls for close links to an organisation's control attributes and its strategic priorities (Simons, 1987; 1990; Govindarajan, 1988). This development is viewed as strategic because of the existence of an element of strategy as a determinants of MCS design. Furthermore, as a consequence of the increased importance of strategy in the eighties, there were also suggestions for management accounting to play a role in providing information for strategic decision making. For example, Shank and Govindarajan (1992) illustrated how

value chain analysis using a strategic cost analysis perspective would result in different decisions as compared to analysis done using traditional management accounting techniques. In particular the concept of strategic cost management (SCM) was advanced in dealing with organisations' value chain – from basic raw material components to end-use consumers (Shank, 1989; Shank and Govindarajan, 1988; 1992).

This paper attempts to further enrich our current knowledge on information elements that constitute SMA. Specifically, it further develops SMA conceptualisation from strategic information requirement in quest for organisation's sustainable competitiveness. Anecdotal evidence found some important elements of SMA being practiced by organisations to face their competitive market. For example, Rickwood, et al. (1990) found that their case company had provided external information relating to their competitors' marketing performance and planning to deal with their market share which was under threat. Lord (1996) reiterates that knowledge of competitor's cost, and relative market share and cost structures enables a firm to detect when the competitor is trying to change relative competitive positions and possible competitor reactions respectively. Parallel to the development, it was found that SMA also consists of information for strategy development and planning, and information to monitor market condition, competitor's cost structure, and competitor's pricing policies (Collier and Gregory, 1995).

Thus, in line with the arguments above, three important elements of SMA information are set forth in the current paper which is competitor information, customers' information, and product-related information. The importance of the three elements of SMA information is indisputable for organisations operating in today's intensified business environment. Malaysia as an emerging economy, its environment is undoubtedly highly competitive. In respect of E&E industry, the nature of operation and competition requires E&E companies to continuously use those elements of information which could foster continuous cost reduction and product innovation which are the key success factors of today's company (Hiromoto, 1991).

Competitor analysis has long been carried out by organisation in the course of developing and implementing their strategic planning and controlling of strategy (Langfield-Smith, 1997). Understanding competitors are extremely important and growing in importance (Ghoshal and Westney, 1991), where organisation's strengths and weaknesses are determined relative to their competitors (David, 2003). Incorporating competitor analysis in organisation's management accounting system enables them to monitor the progress of their strategy relative to their core competitor. Competitive advantage could be achieved as a result of being superior relative to one's competitor. Simmonds (1981) reiterates that competitive advantage is a function of company's superiority relative to competitors.

The second element, customers' information is also notably crucial for companies' future achievement. It is apparent where companies incorporate elements of customer-focused approach in their strategic priorities (Kaplan and Norton, 1996). Porter (1985) reiterates that satisfying buyer needs is at the core of success in business endeavour. Big corporations incorporate management accounting information that is related to its objectives towards customer-orientation (Bromwich, 1992). Bromwich (1992) reiterates that companies' ability to match consumer tastes are important determinant of companies' market share and sustaining their products in the market. Thus, the usage of customer-related information is crucial for companies to meet their objectives related to their customers.

In relation to product-related information, Bromwich (1992) argues that today's competition focuses on strategic product and services characteristics such as operating performance, product finish, low cost to consumers, high reliability and quality, good after-sales services, and rapid supply response to customer demands. As a result, those mentioned strategic variables should not be taken lightly by companies in their course of competing. For E&E companies in particular, product price, quality, and functionality became apparently important key success factors as a result of more alternatives that are available due to the escalating players in the industries (Bromwich, 1990; Cooper, 1996).

In summary, consistent with the various concepts put forward by SMA advocates, this paper conceptualises elements of SMA as *'the provision of information and analysis of major competitors, customers, and product-related features that enable an organisation to monitor and evaluate the progress of its competitive strategy and long-term achievement in the market place'*.

Methodology

Sample

Details of Malaysian Electrical and Electronics (E&E) companies were obtained from the directory of Federation of Malaysian Manufacturers (FMM) year 2007 and used as the population sample of the current research. Data was collected using mail questionnaire sent to top managers of the E&E companies. As this formed an exploratory research, a total of 30 companies were approached with questionnaires which were sent randomly to the selected large E&E companies. 23 questionnaires were returned which were all usable as a basis for the data analysis. Most of the companies were multinational companies (87%) and had been in operation for more than seven years. 28% of the companies had an average annual sale of RM5 mil-RM50 mil in the past three years while the

others (72%) had an average annual sales of more than RM50 mil in the past three years. In terms of their focus market, 4.3% cater for the local market only, 26.1% cater for export market only, and 69.6% focus on both local and export market. All respondents were senior managers.

Variable Measurements

Sourcing an established measurement instrument was bound to be difficult. To date, an instrument by Guilding et al. (2000) had proved to be ground breaking in how SMA information could be captured. They had distilled twelve practices as SMA surrogate. However, preliminary interviews carried out prior to the current research found that practitioners did not always appreciate the technical terms utilised in the original instrument. For example one manager, when interviewed asserted:

We like to think we are doing something very distinctive, different, and unique. The reality is we will have slightly different terminology, or we are doing it at different pace. Again, the techniques which feed into it vary somewhat and that's largely influenced by what the strategic priorities are for particular organizations at a point in time. - Financial Director

The current research had conceptualised SMA information as having three dimensions which are represented by competitor information, customer information, and product-related information. As a result, it refined the instrument and produced a modified version consisting of 26 items. Each respondent was required to indicate the extent of their organisations' usage of SMA information for their strategic purposes which is anchored by a seven-point Likert scale ranging from '1 = Not used at all' to '7 = Greatly used'. The 26 items of variables consisted of the first 10 items which measured competitor information analysis, 6 items measuring customer information analysis, and another 10 items measuring product-related information analysis. The reliability statistics for each measurement is presented in Table 1. It can be seen that the Cronbach alpha of the three dimensions scored more than the suggested minimum coefficient of .60 which indicates the stability and consistency with which the instrument measures the concept and assess the goodness of the measure (Sekaran, 2003).

Table 1: Reliability Statistics (n = 23)

SMA Elements	Cronbach's Alpha	N of Items
Competitor Information Analysis	.933	10
Customer Information Analysis	.805	6
Product-Related Information Analysis	.922	10

Results and Findings

The research reveals some interesting findings which sheds light on the development of SMA information usage among E&E organisations. Previous researches had reported that SMA information appreciation and level of usage by organisations were rather limited (e.g. Cadez, 2006; Guilding, 1999; Guilding et al., 2000; Guilding and McManus, 2002; Rickwood et al., 1990). The most widely utilised information was competitor information analysis, while other SMA information (e.g. customer information, product-related information) was rather negligible (Guilding et al., 2000). However, the result of the current research show an interesting progress about the level of SMA information usage among organisations.

Table 2 below presents the descriptive statistics concerned with the extent of E&E companies' usage of respective elements of SMA information. The extent of usage of each element is presented in a descending order. The level of usage of most of the SMA information elements was high. Most items scored a mean value above midpoint of the measurement scale of the seven point Likert scale. Mean usage of all SMA information elements ranging from 4.87 to 6.09. This finding contrasted with previous researches which suggested that the SMA information level of usage was rather limited (e.g. Cadez, 2006; Guilding et al., 2000; Guilding and McManus, 2002). The current research reveals that organisations (E&E in particular) had started to appreciate the importance of SMA information for their strategic purposes, which is mainly to manage their market competition and strategy implementation. Thus, the importance of SMA information elements such as competitor information, customer information, and product-related information are indisputable for organisations to craft their long-term achievement.

In the case of customer information analysis in particular, the results of the current research reveals that E&E companies use these elements of information to quite an extent. As shown in Table 2, the mean usage ranges from 5.09, for 'forecast profit earned from customer', to 5.74 for 'tracks customers warranty claims'. The other information such as 'customer profitability analysis', 'forecast revenue streams', 'forecast on cost of servicing' scored a mean value of 5.61, and 'forecast customer future profits' scored a 5.43 mean value. All the items scored above the midpoint of the measurement scale.

The results also revealed that E&E companies used product-related information analysis to greater extent. It can be seen from Table 2 above that that all the product-related information analysis items scored above the midpoint of the measurement scale. The mean of the usage rate ranges from 5.22, for 'tracks market penetration related costs, to 6.09 for 'cost management during R&D'.

Table 2: Descriptive Statistics (n = 23)

	Minimum	Maximum	Mean	Std. Deviation	Theoretical Range
Competitor Information Analysis					
Estimate competitor's pricing	4	7	5.48	.994	1 - 7
Estimate competitor's market share	3	7	5.48	1.163	1 - 7
Appraise competitor's quality program	2	7	5.35	1.229	1 - 7
Appraise competitor's growth rates	3	7	5.35	1.301	1 - 7
Estimate competitor's sales trend	2	7	5.30	1.222	1 - 7
Estimate competitor's costs structure	2	7	5.13	1.180	1 - 7
Estimate competitor's profitability	2	7	5.09	1.311	1 - 7
Appraise competitor's R&D investment	2	7	5.04	1.492	1 - 7
Appraise competitor's tech investment	2	7	5.04	1.331	1 - 7
Appraise competitor's cost reduction	2	7	4.87	1.217	1 - 7
Customer Information Analysis					
Tracks customers warranty claims	2	7	5.74	1.356	1 - 7
Customer profitability analysis	4	7	5.61	.891	1 - 7
Forecast revenue streams	4	7	5.61	1.033	1 - 7
Forecast on cost of servicing	4	7	5.61	1.076	1 - 7
Forecast customer future profits	3	7	5.43	1.237	1 - 7
Forecast profit earned from customer	1	7	5.09	1.443	1 - 7
Product-Related Information Analysis					
Cost management during R&D	4	7	6.09	.900	1 - 7
Track internal failure related costs	4	7	5.87	1.058	1 - 7
Track external failure related costs	4	7	5.87	1.014	1 - 7
Tracks quality assurance related costs	3	7	5.74	.864	1 - 7
Appraises product attributes	3	7	5.61	1.158	1 - 7
Tracks prevention costs	3	7	5.48	1.082	1 - 7
Appraises cost across product life-cycle	3	7	5.48	1.082	1 - 7
Monitors value creating activity	3	7	5.39	1.118	1 - 7
Tracks product positioning related costs	3	7	5.26	1.322	1 - 7
Tracks market penetration related costs	3	7	5.22	1.278	1 - 7

With regards to competitor information analysis, as expected, the usage rate is high. The mean value ranges from 4.87 to 5.48. It implies that E&E companies use competitor information analysis in their strategic pursuit. 'Appraise competitor's cost reduction' usage however seems to be a little bit low, slightly higher (4.87) than mid point of the measurement scale compared to other elements of competitor information. Others seem to be high, with 'estimate competitor's pricing' and 'estimate competitor's market share' scoring the highest mean usage (5.48).

Discussion and Conclusion

As has been highlighted in the earlier section the progress of SMA, in terms of adoption and use, has, thus far, been slow and rather daunting compared to the

importance claimed by its advocates. To date, our knowledge on SMA has been conceptually limited while only a minimum of empirical evidence was available. In the light of this situation, the current research has attempted to explore the progress of SMA in Malaysia with specific reference to the Electrical and Electronics (E&E) companies. SMA information was conceptualised in the current research as the provision of management accounting information and analysis of major competitors, customers, and product-related features in line with the arguments set forth by SMA advocates.

Framed within the sample of the current research, the results indicated that E&E companies used SMA information extensively. The results could be interpreted that companies operating in today's environment emphasise strategic information in order for them to compete in the market. This was in line with the suggestion that companies used SMA information as a mean to manage their market competition (e.g. Cravens and Guilding, 2001; Guilding, 1999; Guilding et al., 2000; Palmer, 1992). The E&E sector in Malaysia in particular, its competitive environment is apparently intense. Its export orientation had exposed itself to great challenges posed by its counterparts from other parts of the world, and had been significantly affected by the market liberalisation and globalisation. Thus, wide usage of SMA information could be expected.

For example, with reference to the information and analysis of competitors, companies require the information to aid managers in formulating and monitoring their organisation's strategy (Simmonds, 1981). Simmonds (1981) concern is on organisation's competitive positioning in its industry as the basic determinant of future profits and organisation's value. SMA information elements such as estimating competitor costs structure, pricing, R&D investment apparently provide the company with valuable information that could be used to track its competitiveness relative to their competitor. In addition, previous researches had proven that competitor information was the most widely used element of SMA information (e.g. Collier and Gregory, 1990; Cravens and Guilding, 2001; Guilding 1999; Guilding et al., 2000; Rickwood et al., 1990). Belohlav (1993) reiterated that recognising the importance of competitor information enables a company to gauge not only on what products and services their competitors are providing, but also how they are providing the product and services.

Customers' information was also portrayed as another important element of SMA information that should be provided for strategic purposes. The current research has revealed that E&E companies in Malaysia use the information extensively. This is in line with the argument by Bromwich (1992) that big corporations incorporated or rather used management accounting information relating to its objectives towards customer-orientation. For E&E companies, the importance of

the information is indisputable. With the rapid changes in technology and customer's preferences and tastes, knowing about customers is notably crucial. Analysing customer warranty claims, customer profitability analysis, and customer revenue streams would reveal the aspect that a company should further emphasise or rather improve in relation to their customer.

Another important element of SMA information is product-related information advanced by Bromwich (Bromwich, 1990). He argued that because today's customer has become sophisticated, disloyal, and demanding, organisations were forced to concentrate on matters pertaining to the product market to maintain its existing share or to attract new customers. The results of the current research reiterated the importance of the information where E&E companies used product-related information widely. For example, product-related information about cost management, value-creating activity, and cost across product life-cycle to mention a few notably important for organisations' continuous improvement towards the quality of their product and cost advantage which become the key success factor in today's competitive market.

A few practical implications could be drawn from the findings of the current paper. Firstly, the finding implies that E&E companies placed great emphasis on management accounting information beyond its traditional settings and have expanded their management accounting requirements geared towards a more strategic approach. Practically, this highlighted that SMA information enabled companies' to closely monitor their ability to sustain, under intensified competitive market. Thus, the usage of SMA information is widely adopted in companies operating in today's environment.

Secondly, the finding has also highlighted that companies used SMA information as a means to manage their market competition. The competitive environment in E&E companies in Malaysia in particular, is apparently intense. Its export orientation had exposed itself to great challenges posed by its counterparts from other parts of the world. Thus, the reported high usage of the SMA elements amongst E&E companies implies the value of the information in their quest for superiority relative to their core competitors be it through the product they offered, or their ability to meet their customers' need. Thus, companies should incorporate the elements of SMA information into their management accounting system should they intend to be highly competitive relative to their core competitor.

In summary, the current paper has contributed to the current state of SMA usage among organisations in Malaysia. As has been reported above, most of the samples were MNCS with an average annual turnover of RM50 mil. Though generalisation is limited due to the small number of sample, a general scenario could be set

forth. The findings of the current research shows that organisations operating in today's competitive market use SMA information elements quite widely, though perhaps they do not use the terms which have been incorporated in the western developed literature. The current research has conceptualised SMA information as consisting of information analysis of competitor, customer, and product-related issues. This finding highlighted the importance of that information.

Otley (1994) has reiterated that the key goal of contemporary organisations centres on the need for survival by adaptation and only those organisations which match their capabilities to the changing needs of the market place will survive in the long-term. Thus, the current findings implied that the E&E companies have used SMA information perhaps to adapt to the needs of the competitive market they face.

The study's findings should be interpreted in light of some limitations. Firstly given the sample size it is appropriate to categorise this research as exploratory. Future researches should extend the sample size to a larger sample to be able to have a better variation and greater validity. Secondly, the current research was an exploratory study with the main objective to look into the level of SMA information usage among organisations. Future research could consider designing a study, framed within a theoretical standing, which perhaps could understand the antecedents and outcomes of SMA information usage amongst organisation. This could offer better understanding on SMA related issues and could be used as a basis for further refinement of strategic management accounting system design by organisations.

Notwithstanding the limitations, the current research has enriched our knowledge on the current state of SMA information usage among organisations with particular reference to Malaysia and the electrical and electronics (E&E) sector. The current findings have rejected the notion that '*SMA is just another figment of academic imagination*' posed by Lord (1996) who questioned whether SMA is useful and applicable at all. The current finding reveals that SMA information is adopted and used, apparently practitioners believe that it does add value to organisations. This posed a challenge to the academia to further refine the current state of SMA information. Consensus on what should constitute SMA could be set forth to enable a coherent framework development.

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