
Traditional and Currently Developed Management Accounting Practices – A Greek Study

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Abstract:

This study investigates the extent to which Greek firms have implemented various traditional and currently developed management accounting practices, the benefits received from those practices and the intentions to focus on specific practices in the future.

The findings indicate, that, overall the rates of adoption of traditional management accounting practices were marginally higher than the currently developed techniques.

However, there were techniques such as budgeting and formal strategic planning, which were more widely practiced than those found in previous surveys.

Also evidence suggests that firms are willing to place greater emphasis in the future on currently developed techniques instead the traditional ones, particularly performance evaluation techniques and strategic management accounting.

Key Words: *management accounting, performance measurement, benchmarking, strategic management accounting*

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1. Introduction

Simon *et al.* (1954) presented accounting as serving three main functions: attention directing, problem solving and scorecard keeping. All these functions serve control. Attention directing refers to the procedure being controlled when the results are not according to expectations. Problem solving refers to the provision of data either proactive or reactive. Scorecard keeping refers to the examination of individual and organizational goal achievement. Management accounting (MA) is one area that takes care of the decision process in the organization. This implies that its tools must provide support for the entity to obtain better results than under the conditions of its non-existence.

Lately, there is an increasing demand from practitioners that MA to become more adaptive to changing needs of managers. The scale of this demand can probably be attributed to a variety of reasons (Brierley *et al.*, 2001).

First, prior to the 1990s there was very little evidence regarding management accounting practices. Nevertheless, there was a general belief about a gap between management accounting theory and practice (Scapens, 1991) carrying the implication that theory had had little influence on practice (Otley, 1985; Choudhury, 1986; Edwards and Emmanuel, 1990).

Second, there has been an interest in examining how management accounting practices are changing due to changes in the business environment in a variety of organizations (Brierley *et al.*, 2001).

Third, there was an enormous amount of publicity in the late 1980s relating to criticisms of management accounting practices. The most notable criticisms emanated mainly from the professors Kaplan, Cooper and Johnson, (Kaplan 1984, 1985, 1988, 1990; Cooper and Kaplan, 1987, 1991; Johnson and Kaplan, 1987; Kaplan and Cooper, 1998).

Fourth, the increasing harmonization of financial accounting and advances in information technology have created an interest in the extent to which there is a common ground in management accounting practices across Europe (Pistono and Zoni, 2000).

Fifth, there is an interest in the more general issue of whether management accounting in Europe is becoming part of “global” management accounting practices and whether the same management accounting systems are being applied in variety of countries (Granlund and Lukka, 1998a , 1998b; Shields, 1998; Harrison and

McKinnon, 1999). As a result of this demand was the development of some new varieties of practices.

Traditional MA practices such as budgeting, costing and profitability analysis mostly focus on internal organizational issues and are financially oriented. Additionally, MA methods bifurcate financial and non-financial information focusing in a more strategic orientation have been developed recently. This can be seen in strategic MA techniques such as: competitor cost assessment, life cycle costing, strategic pricing, etc. (Guilding *et al.*, 2000).

Several studies have analysed the adoption and benefits of traditional and recently developed management accounting practices (MAP) all over the world (Shields, 1998; Brown *et al.*, 2001; Malmi, 2001; Haldma and Laats, 2002; Lin and Yu, 2002; Szychta, 2002; O'Connor *et al.*, 2004). Chenhall and Langfield-Smith (1998) in their concluding comments suggest that future research should be directed to gain a better understanding of the factors that influence differences in the levels of adoption of recently developed MA techniques between countries.

Chenhall and Langfield-Smith (1998) surveying the Australian manufacturing sector found that traditional management accounting techniques were found to be more widely adopted than recently developed techniques, also there is an intention for greater attention to newer techniques in the future, especially activity-based techniques and benchmarking. Their study raised a few issues that warrant future research.

First, it is too early to hypothesize that future management accounting techniques lack relevance. Second, the connection between traditional and recently developed management accounting techniques needs further investigation (Thalassinos *et al.*, 2013; 2014; 2015). Third, the recently developed techniques produced lower benefits than the traditional ones; therefore the conditions necessary to effectively implement these techniques should be further investigated. Fourth, they suggest further investigation for better understanding of the factors that influence differences in the levels of adoption of recently developed MA techniques between countries, Chenhall and Langfield-Smith (1998).

Also Langfield – Smith (2008) in a 25 year review for strategic management accounting (SMA) as a part of MA she states: "...the style and content of performance measurement systems have changed over the decades, to reflect a more strategic orientation.... Future research might focus on considering the nature of contemporary management accounting work and management accounting information that is used

within organizations. It would be useful to understand how techniques diffuse into more general practice and into organizational processes” (Langfield – Smith, 2008: 223-224).

The major aim of this paper is to take into account the Chenhall and Langfield-Smith (1998) suggestion that future research should be directed to gain a better understanding of the factors that influence differences in the levels of adoption of recently developed MA techniques and their respective varieties between countries. As a result of the above, differences in management practices in each country lead us to take the opportunity to explore the issue. However, almost all of this research has been country specific (Brierley *et al.*, 2001).

In Greece, Ballas and Venieris (1996) after conducting a series of interviews in some major Greek firms noted that there was no clear picture as to what guides MA development in Greece. In their concluding remarks state that most companies used accounting for fiscal consideration purposes instead as a tool to improve their management. Cohen *et al.* (2005) and Venieris and Cohen (2008) investigate mainly the reasons for ABC adoption in Greek enterprises. Therefore, there is a little evidence on MA practices and especially on the issue of adoption and benefits of both traditional and currently-developed MA practices, or the focus that firms plan to place on specific MA methods in the future. The purpose of this article is to contribute to our knowledge in this area regarding Greek practices.

Also, these results are compared with other older survey based studies and will be attempted to detect any trends in local and international MA practices. The rest of this article is structured as follows. In Section 2 the research method is presented. Section 3 presents a discussion on the survey results. A comparison is made between findings from the current study and those of prior surveys in a range of countries. Section 4 considers future emphasis for MA practices in Greece. In Section 5 there is a conclusion and some limitations on this research and in section 6 there are some directions for the future.

2. Research Methodology

A survey was managed to 415 organizations in three main types of industries: manufacturing, services and commerce. Within each industry firms were selected to reflect a wide range of organizational performance. Concerning the sample of our research the top 415 Greek companies were examined ranked with multi-criteria method by ICAP (a Greek financial and business information company). With respect to the entity profile, this study focuses on the medium and large-sized organizations, since the small ones present some difficulties and mostly these companies do not have the tools, information is rare, and in some cases, the available information is far from reliable.

The objective should be to choose companies ranked by sales volume and manpower and examine whether they follow more or less the proposed practices by modern and traditional management accounting theory. The surveyed sample comprised from companies in the manufacturing, commerce and service sectors. Sales revenues and manpower for the year 2006 were the main criteria for the sample selection. In Greece, as anywhere else, larger companies are those expected to use most of the tools and practices proposed. Therefore turnover and manpower were the key figures for company selection. A pilot testing was performed before the finalization of the questionnaires in order to assure that practitioners had a firm understanding of the terminology.

Within the survey, respondents were asked to indicate whether their firms had implemented each management accounting practice and then for those who had used it in daily practice, to assess the benefits gained over the last three years. Participants were also asked the degree of emphasis that their business would give to each practice over the next three years.

Piloting is mandatory in order to investigate the reaction and interpretation of respondents to the questionnaire and realize the level of understanding. Conducting a pilot research before the final survey allows any significant problems in the first version questionnaire to be identified and corrected (Gill and Johnson, 2002). The survey is divided in two parts. More specifically in the first phase a draft questionnaire was sent to fifteen selected companies, big four management consulting firms in order to realize if companies wanted to participate and if people involved understood the structure and meaning of questions and the logic behind them. When questionnaires received back and after the appropriate corrections were made, proper questionnaires were sent to sample companies. In the second phase questionnaires were sent by post (including a pre-paid reply envelope) to the companies that had agreed to participate. It was assumed that the higher the professional status of the executive who participated the higher the reliability of the responses received.

The survey tool, the questionnaire, was chosen for capturing data due to the fact that it can be used with objectivity and has an ample range. In its construction, the following factors were considered: which elements to research, in order to detail the components that could affect the formulation of the questions; consistency in analysis of the questions, sequence and jumps and checking of the goals pretended to be reached from the pre-test.

The data collection process involved five phases. Phase one entailed industry background research to familiarize the research with key industry issues and characteristics. Phase two was the creation of the survey instrument, the questionnaire. Phase three involved pre-tests of the questionnaire in fifteen randomly selected

organizations of each industry and finalization of format. Phase four involved the distribution, follow up and collection of questionnaires. Phase five involved administration and analysis of the survey instrument results. In the above steps the questionnaire format from Gill and Johnson (2002) was adopted and integrated as part of the proposed survey currently undertaken (Gill and Johnson, 2002: 115).

Regarding collection of data from 415 companies, 214 returned the questionnaire which corresponds to 51% response rate. After excluding 16 incomplete questionnaires, a total of 198 questionnaires (or 47%) retained for analysis, rest of demographic data see Table 1.

3. Survey Results and Discussion

The MAP Concept

Management Accounting Practices (MAP): Various researchers presented evidence regarding MAP and related benefits, (Chenhall and Langfield-Smith, 1998; Ernst & Young and IMA, 2003; Baines and Langfield-Smith, 2003). These academics divide MAP in four major categories as follows: Planning and Budgeting Tools, Decision Support Tools, Cost Analysis Tools, Performance Evaluation Tools. Guilding *et al.* (2000) in their international study about Strategic Management Accounting (SMA) argue that an ordinary management accounting system (MAS) is not long-termed and future-oriented nor has any marketing or competitor focus.

These systems provide information concerning the current and expected states of strategic uncertainties (Bromwich, 1990; Simons, 1991). Thus, SMA comes to complement the gap. Therefore in the current study an advanced MA category was added, the Strategic Management Accounting Tools. It has to be noted that the categorization of MAP, all categories, is presented first time from this study and in this format and mainly for the understanding of practitioners.

4. General Findings

Table 2 lists items in order of the average significant benefits received from using each MAP in the last 3 years. The most beneficial MAP found were mainly Budgeting – Detail budgeting systems for controlling cost (Mean 4.60), Decision support systems – Product profitability analysis (4.44), Performance evaluation based on – Budget variance analysis (4.43). On the opposite site are those practices which give the organizations tested the least benefits, and these are: Brand value budgeting and monitoring (3.67), Value chain analysis (3.57), and Strategic plans developed - Separate from budgets (2.93).

Table 3 presents the companies' preferences regarding past use of MAP. Fifteen practices were adopted by 90% of the sample and 16 practices, more or less the same, will continue to enjoy the favor of companies for the next three years, Table 4. A further 10 practices were adopted by at least 80% of companies. The respective

number for future use in this percent category is 7 practices. All but two items were used by at least 50% of respondents in the sample.

The techniques which are mostly adopted by the majority of the sampled firms are: Formal strategic planning 100%, Detail budgeting systems for: Planning - Cash flows 100%, Detail budgeting systems for: Controlling Costs 99%. On the bottom part of the table are the techniques used less and these are Strategic Man. Accounting: Value chain analysis 55%, Performance evaluation is based on: Balance scorecard (mix of financial and non-financial measures) 48%, Cost analysis: Process Costing 45%.

Conceptual survey analysis

In order to present our findings in a more conceptual framework and according to the classification of Chenhall and Langfield-Smith (1998a) the following MAP structure is adopted:

- performance evaluation practices (financial (F) and non-financial (NF)),
- planning practices (short term (P) and long term (P LT)),
- strategically oriented practices (SP).

To structure our analysis we adopt and modify the classification of Chenhall and Langfield-Smith (1998a) regarding ranking and grouping classification. Therefore in Table 2 the items, in terms of significance, are divided into three groups according to ranking: the first 20 items (ranked 1-14) classified as significant benefits gained, the next 20 items (ranked 15-28) as medium benefits gained, and the remaining 17 items (ranked 29-42) as low benefits gained. Similarly, the items in table 3 are divided into three groups according to ranking: the first 20 items (ranked 1-12) classified as of high implementation, the next 20 items (ranked 13-22) as of medium implementation, and the remaining 17 items (ranked 23-35) as of low implementation.

In order to lead our analysis to the aforementioned framework the information in the abovementioned tables 3 and 4 was rearranged and two new tables were created, Table 4 and Table 5.

Table 4 presents each management accounting practice (MAP) which is ranked in order of the percentage of respondents who indicated their organization had used the practice. Items are also classified as the five aforementioned MAP groups and also as contemporary or traditional practice.⁵

Table 5 the left part lists the items in order of the significant average benefits received from using each practice during the past 3 years while the right part refers

⁵ *The classification between contemporary and traditional practices was adopted and modified from Chenhall and Langfield-Smith (1998a).*

to the future emphasis that companies are willing to give. Standard deviations (SD) are given in order to present the diversity of responses. All above classifications are necessary in order to create a basis to compare, first the level of relative implementation of practices across the sample and then the benefits derived from each item by practitioners. Also same classifications with Table 4 were followed regarding the MAP groupings and contemporary or traditional practices. The classification scheme is not meant to imply that implementation (or benefits) are either high or low in any absolute sense. For example, most items in low implementation group were used by more than 50% of the sample. Also, the rankings of items on implementation (Table 4) and benefits received (Table 5) do not necessarily correlate.

Table 6 refers to increased and decreased rankings of future emphasis, by this listing it is attempted to detect a trend in future practices.

Financial Measures (Practices)

Various researchers have presented evidence that financial measures of performance are very important in many countries (Ballas and Venieris, 1996; Israelsen *et al.*, 1996; Bhimani, 1996, Chenhall and Langfield-Smith, 1998).

The findings of the current study confirm the importance, in Greece, of financial measures of performance. Table 4 presents relatively high implementation rates for Detail budgeting systems for: Controlling costs (ranked equal 2), Performance evaluation is based on: Budget variance analysis (ranked 3), Performance evaluation is based on: Return (profit) on investment (ranked 5), Detail budgeting systems for: Planning – Operational Budgeting (ranked 9), Decision support systems: Product profitability analysis (ranked 9), Performance evaluation is based on: Divisional profit (ranked 11), Performance evaluation is based on: Controllable profit (ranked 20) and low implementation was for: Performance evaluation is based on: Residual income (e.g. interested adjusted profit) (ranked 31).

The importance of these practices is confirmed when examining the benefits gained from these techniques. In Table 5 are presented the significant benefits received by practicing various traditional techniques such as: Detail budgeting systems for: Controlling costs (ranked 1), Decision support systems: Product profitability analysis (ranked 2), Performance evaluation is based on: Budget variance analysis (ranked 3), Performance evaluation is based on: Return (profit) on investment (ranked 5), Detail budgeting systems for: Planning – Operational Budgeting (ranked 10), Performance evaluation is based on: Controllable profit (ranked 13), Performance evaluation is based on: Divisional profit (ranked 14). Low benefits were reported for Performance evaluation is based on: Residual income (e.g. interested adjusted profit) (ranked 36).

Here is worth it to mention Szychta (2002), who reports the same investment appraisal methods used in Poland like the ones used in this survey instrument (Capital Budgeting items such as Return on Investment (ROI), Payback period, Net present value (NPV), Internal rate of return (IRR), NPV sensitivity analysis) but the adoption rates are between 15-40%, while in current study the respective use is between 66-86%. Similarly, Haldma and Laats (2002) referring to similar costing methods (such as Absorption or Full costing, Activity – based costing, Process Costing, Job Order Costing, Standard Costing, Marginal / Direct Costing, Project Costing) in Estonian organizations report implementation rates between 7-55% while in this study the respective use is between 61-73%.

These findings are in accordance of various researchers who have presented evidence that financial measures of performance are very important in many countries (Ballas and Venieris, 1996; Israelsen *et al.*, 1996; Bhimani, 1996, Chenhall and Langfield-Smith, 1998).

Non-financial Measures (Practices)

Drury (2000) states that financial summary of performance provides only a limited view of the efficiency and effectiveness of actual operations. In today's competitive environment organizations shift their focus on product quality, delivery, reliability, after sales service, customer satisfaction and other non-financial measures.

Table 4 shows that non-financial measures were included in mainly high and medium categories of implementation. Thus, in the high implementation category were: Detail budgeting systems for: Compensating managers (ranked 2), Performance evaluation is based on: Customer satisfaction surveys (ranked 4), Performance evaluation is based on: Qualitative measures (ranked 6), Performance evaluation is based on: Employee attitudes (ranked 12). In medium implementation category were: Performance evaluation is based on: Team performance (ranked 14), Performance evaluation is based on: Ongoing supplier evaluations (ranked 14), Performance evaluation is based on: Non – financial measures (ranked 18), while in low implementation category was the Performance evaluation is based on: Balance scorecard (mix of financial and non-financial measures) (ranked 34). These items could be used in areas of strategic importance (McNair and Mosconi, 1989; Lynch and Cross 1992).

The importance of these practices is also confirmed when examining the benefits gained from these techniques. Thus in Table 5 presented the benefits gained for practicing non-financial techniques which in this case represent all kinds of importance. Hence, of high significant importance were the: Performance evaluation is based on: Customer satisfaction surveys (ranked 6), Performance evaluation is based on: Ongoing supplier evaluations (ranked 11). Of medium benefits were: Performance evaluation is based on: Qualitative measures (ranked 19), Detail budgeting systems for: Compensating managers (ranked 24), and of low benefits

received were the Performance evaluation is based on: Team performance (ranked 32), Performance evaluation is based on: Employee attitudes (ranked 34), Performance evaluation is based on: Balance scorecard (mix of financial and non-financial measures) (ranked 35), Performance evaluation is based on: Non – financial measures (ranked 39).

Summarizing, the findings suggest that financial performance measures continue to be an important part of management accounting practice in Greek firms supplemented with a variety of non-financial ones. Ballas and Venieris (1996) had reported a similar situation for Greece regarding financial and non-financial measures with financial measures to be of high importance for the companies.

This study presents evidence that financial performance measures continue to enjoy high appreciation in implementation order compared with the non-financial ones. Most of them are falling in the *high implementation* category where non-financial ones are distributed almost 50% in the *high implementation* and 50% in *medium* and *low* implementation levels. Similar situation applies for the *past benefits gained* and *future emphasis*. In general financial measures continue to enjoy higher appreciation than the non-financial ones.

Planning Practices

Besides performance evaluation, management accounting provides information for planning (Emmanuel *et al.*, 1990). The main techniques for this task are, first, budgeting for short term resource planning, second, capital budgeting and strategic planning for the long term. In Table 4 presented twenty traditional planning techniques of various importance of implementation and includes eleven short term practices, five concerned with budgeting and decision support systems and six with costing, and nine with long term planning. The budgeting practices of high implementation importance were: Detail budgeting systems for: Planning - Cash flows (ranked 1), Detail budgeting systems for: Planning - Financial position (ranked 10). Of medium implementation importance was: Detail budgeting systems for: Planning - Day-to-day operations (ranked 15), Operations research techniques (ranked 18), Cost analysis: Standard Costing (ranked 21), Decision support systems: Cost volume profit analysis (e.g. breakeven analysis) (ranked 22), Cost analysis: Project Costing (ranked 24).

Of low implementation importance were: Cost analysis: Marginal / Direct Costing (ranked 27), Cost analysis: Job Order Costing (ranked 28), Cost analysis: Absorption or Full costing (ranked 29), Cost analysis: Process Costing (ranked 35).

Techniques concerned with the long term were, of high implementation rates, Formal strategic planning (ranked 1), Strategic Plans Developed: Together with budgets (ranked 7), Long Range Forecasting (ranked 8), Capital Budgeting: Net present value (NPV) (ranked 9), Capital Budgeting: Return on Investment (ROI)

(ranked 12). Of medium implementation importance was the techniques: Capital Budgeting: Payback period (ranked 13), Strategic Plans Developed: Separate from budgets (ranked 18), Capital Budgeting: Internal rate of return (IRR) (ranked 19). Of low implementation importance was the tool: Capital Budgeting: NPV sensitivity analysis (ranked 26).

The importance of significant benefits received is reported in Table 5. Thus of significant benefits received were: Cost analysis: Absorption or Full costing (ranked 6), Detail budgeting systems for: Planning - Day-to-day operations (ranked 7), Detail budgeting systems for: Planning - Cash flows (ranked 8), Cost analysis: Job Order Costing (ranked 9), Cost analysis: Project Costing (ranked 9), Decision support systems: Cost volume profit analysis (e.g. breakeven analysis) (ranked 12). Of medium benefits received were Detail budgeting systems for: Planning - Financial position (ranked 22), Cost analysis: Standard Costing (ranked 23), Operations research techniques (ranked 28). Of low benefits received were: Cost analysis: Process Costing (ranked 30), Cost analysis: Marginal / Direct Costing (ranked 33).

For long term planning techniques of significant benefits received were: Formal strategic planning (ranked 6), Strategic Plans Developed: Together with budgets (ranked 7), Capital Budgeting: Net present value (NPV) (ranked 11). Of medium benefits received were: Long Range Forecasting (ranked 15), Capital Budgeting: Return on Investment (ROI) (ranked 16), Capital Budgeting: Internal rate of return (IRR) (ranked 18), Capital Budgeting: Payback period (ranked 21). Of low benefits received were: Capital Budgeting: NPV sensitivity analysis (ranked 29), and Strategic Plans Developed: Separate from budgets (ranked 42).

These findings suggest that both formal strategic planning and traditional budgeting systems provide high benefits for the organizations. Relatively moderate benefits were reported for long range forecasting which usually supports strategic planning. Also these findings support the view that strategic planning is implemented by many companies and contrasts with an older view that formal strategic planning is not implemented enough and does not improve performance (Mintzberg, 1994; Carr and Tomkins, 1996).

Summarizing, the most representative techniques of this category are: budgeting for short term resource planning, and capital budgeting and strategic planning for the long term. These findings suggest that both formal strategic planning and traditional budgeting systems provide high benefits for the organizations, also besides performance evaluation, management accounting provides information for planning (Emmanuel et al., 1990). Relatively lower benefits were reported for long range forecasting which usually supports strategic planning. Also these findings support the view, including Greece, that strategic planning is implemented by many companies and contrasts with an older view that formal strategic planning is not implemented enough and does not improve performance (Mintzberg, 1994; Carr and Tomkins, 1996).

Strategically focused practices

In the late eighties and during the nineties many researchers drew on traditional management accounting methods claiming that they are not appropriate for the rapid changes which occur in global competition, and technology. Also are not compatible with new administrative practices such as just in time, quality management, etc (Cooper, 1998; Bromwich and Bhimani, 1994). Lately developed methods including product life cycle, target costing, value chain analysis, activity based costing, benchmarking and shareholder analysis are presented as the missing links between operations and organizational strategies and objectives.

In the last twenty years activity-based costing (ABC) has been one of the most popular costing tools helping to realize how companies' resources allocated across the value chain to produce strategic outcomes (Shank and Govindarajan, 1993). In the beginning the adoption rates were slow but later on mostly companies in UK and US started to adopt it more (Shim and Sudit, 1995; Innes and Mitchel, 1995; Evans and Ashworth, 1996). Ballas and Venieris (1996) reported that by that time activity-based methods were not implemented in Greece. Later on Cohen *et al.* (2005) reported that in Greece there is an increasing rate of ABC adoption in recent years; also companies which implement ABC do not use it as a mean to improve cost measurement accuracy but rather as a management tool with multiple functions.

The conventional management accounting systems do not provide a long term, future oriented emphasis, and is not oriented towards marketing or competition. Here comes the strategic management accounting (SMA) to give a long term orientation. Simmonds defined SMA as "the provision and analysis of management accounting data about a business and its competitors for use in developing and monitoring the business strategy" (Simmonds, 1981: 26). He claims that profits are generated not from internal efficiencies but from the company's competitive positioning in the respective market. Govindarajan and Shank (1992) referred to term "Strategic Cost Management" (a relationship between strategy and management accounting) which Shank described it as "the managerial use of cost information explicitly directed at one or more of the four stages of the strategic management cycle" (Shank, 1989: 50). The four stages are: strategy formulation, strategy communication, strategy implementation and strategic control.

The evidence from the current study, Table 4, ranked the implementation of ABC methods as relatively medium and low: activity based costing (ranked 22), activity based management (ranked 27), but Detail budgeting systems for: Linking financial position, resources and activities (e.g. activity based budgets) is highly adopted (ranked 3) mainly due to budgeting and financial factors. It has to be mentioned that the level of adoption of these techniques was higher than previous studies, for example Cohen *et al.* (2005) reported a total of 36 companies which implemented ABC out of 88 companies sampled. The current study reports 142 users of ABC and 127 users of activity based management (ABM) out of 198 companies sampled in

total. The benefits though gained from practicing ABC, Table 5, were in moderate ranking (ranked 20) and low from ABM (ranked 37), but high for Detail budgeting systems for: Linking financial position, resources and activities (e.g. activity based budgets) (ranked 4).

Benchmarking was not important to most of the firms surveyed. Benchmarking within the wider organization (ranked 12) was the only item highly implemented. Benchmarking with outside organizations (ranked 16), Benchmarking of: Strategic priorities (ranked 20), Benchmarking of: Product characteristics (ranked 22), were of medium implementation. Benchmarking of: Management processes (ranked 22), Benchmarking of: Operational processes (ranked 23), were on the low adoption side. While adoption rates were relatively moderate and low the benefits received from practicing the respective techniques enjoyed better appreciation, Table 5. With the exemption of Benchmarking carried out: With outside organizations (ranked 9) - highly benefited, all rest are of moderate benefit received: Benchmarking of: Operational processes (ranked 15), Benchmarking of: Product characteristics (ranked 16), Benchmarking of: Strategic priorities (ranked 16), Benchmarking carried out: Within the wider organization (ranked 17), Benchmarking of: Management processes (ranked 21).

Also the rest of Strategic Management Accounting techniques were distributed to all implementation levels, Table 4. Thus, highly implemented were: Strategic Man. Accounting: Competitor appraisal based on published financial statements (ranked 9). Of medium implementation were: Strategic Man. Accounting: Strategic pricing (ranked 17), Strategic Man. Accounting: Competitor cost assessment (rank 21), Strategic Man. Accounting: Quality costing (ranked 20), Strategic Man. Accounting: Target costing ranked 21). Of low implementation were: Strategic Man. Accounting: Attribute costing (ranked 23), Strategic Man. Accounting: Strategic costing (ranked 25), Value chain analysis (ranked 25), Strategic Man. Accounting: Life cycle costing (ranked 30), Strategic Man. Accounting: Brand value budgeting and monitoring (ranked 32), Strategic Man. Accounting: Value chain costing (ranked 33). The relative benefits received, Table 5, from implementing the strategic management accounting techniques were mainly to low category.

Thus, medium benefits received the organizations by practicing the following techniques: Strategic Man. Accounting: Competitor appraisal based on published financial statements (ranked 21), Strategic Man. Accounting: Target costing (ranked 23), Strategic Man. Accounting: Competitor cost assessment (ranked 26). Low benefits were reported for the following categories: Strategic Man. Accounting: Strategic pricing (ranked 29), Strategic Man. Accounting: Life cycle costing (ranked 31), Strategic Man. Accounting: Quality costing (ranked 31), Strategic Man. Accounting: Attribute costing (ranked 32), Strategic Man. Accounting: Strategic costing (ranked 38), Strategic Man. Accounting: Brand value budgeting and monitoring (ranked 40), Strategic Man. Accounting: Value chain costing (ranked 41).

Some recently developed techniques were found to be low adopted and give low benefits as well. These are, Decision support systems: Product life cycle (ranked 25), Value chain analysis (ranked 25). The benefits received were low ranked 25 and 27 respectively.

Similar findings regarding SMA reported by Guilding *et al.* (2000) where they report that “Competitor accounting and strategic pricing appear to be the most popular SMA practices” (Ibid p.128), respectively high and medium implementation in the current study. In the same study strategic costing, quality costing, value chain costing scored above the mid-point of the perceived merit while in the current study the same techniques ranked in the low category of significant benefits gained from implementation. These findings confirm Ghoshal *et al.* (1991) and Foster *et al.* (1994) reported gap between what the organizations need and what they supplied by their accounting systems could be extended to SMA systems more generally (Guilding *et al.*, 2000).

4. Future Emphasis on Management Accounting Practices in Greece

To emphasize on future directions the survey investigated the intention of firms to exercise on each management accounting practice over the next 3 years. The intention of firms is presented on the right hand side of Table 5. Organizations maintain their interest on financial measures to continue to be important in the future as for example the importance for Detail budgeting systems for: Controlling costs which received the highest rank for benefits received, was confirmed for high future emphasis (ranked 2). Similarly, Decision support systems: Product profitability analysis continues to be important for future use (ranked 2 for past benefits and ranked 9 for future use).

Performance evaluation is based on: Budget variance analysis (ranked 3 in past benefits) was also regarded as having continuing relevance in the future (ranked 3). Performance evaluation is based on: Return (profit) on investment (ranked 5) will attend the same emphasis in the future (ranked 5), Detail budgeting systems for: Planning – Operational Budgeting (ranked 10) will continue of high emphasis (ranked 9), Performance evaluation is based on: Controllable profit (ranked 13) will continue with medium emphasis (ranked 21), Performance evaluation is based on: Divisional profit (ranked 14) will be highly emphasized (rank 11). Performance evaluation is based on: Residual income (e.g. interested adjusted profit) low benefits gained from implementation and the future emphasis is ranked low (ranked 32).

Practitioners noted that traditional short-term planning techniques will continue to enjoy future attention. The future emphasis for Detail budgeting systems for: Planning - Cash flows (ranked 1), Detail budgeting systems for: Planning - Financial position (ranked 10), had high and medium rankings for past benefits (ranked 8 and 22). Detail budgeting systems for: Planning - Day-to-day operations (ranked 14 -

medium) had highly benefited (ranked 7). Decision support systems: Cost volume profit analysis (e.g. breakeven analysis) and Operations research techniques have received medium emphasis (ranked 21 both) and in the past benefits had received high and medium benefits (ranked 12 and 28). Some of the Cost Analysis methods received a low future emphasis while in past benefits had high and medium rankings.

Thus, Cost analysis: Project Costing, Cost analysis: Job Order Costing, Cost analysis: Absorption or Full costing, received a low future emphasis (ranked 24, 29, 30) had high rankings in past benefits (ranked 9, 9, 6). Same situation for the Cost analysis: Standard Costing, low future emphasis (ranked 25) and had received medium past benefits (ranked 23). The last two of short-term planning which had low future emphasis and low past benefits were the Cost analysis: Marginal / Direct Costing (ranked 29) and Cost analysis: Process Costing (ranked 35) had received low past benefits (ranked 33 and 30).

For the long term planning practices practitioners increased their future emphasis, thus : Formal strategic planning (ranked 1), Strategic Plans Developed: Together with budgets (ranked 7), Capital Budgeting: Payback period (ranked 7), Long Range Forecasting (ranked 8), Capital Budgeting: Net present value (NPV) (ranked 9), all previous practices have improved their future emphasis (past benefits respective rankings: 6, 7, 21, 15, 11). Also Capital Budgeting: Return on Investment (ROI) (ranked 12) improved to high emphasis from medium benefits gained (ranked 16), Capital Budgeting: Internal rate of return (IRR) remained unchanged (ranked 18 in both), Strategic Plans Developed: Separate from budgets improved from low past benefits received (ranked 42) to medium future emphasis (ranked 20), and Capital Budgeting: NPV sensitivity analysis remained in the same low category (ranked 29 in the past benefits, ranked 26 in the future emphasis).

For the strategic practices the first four in ranking were: Detail budgeting systems for: Linking financial position, resources and activities (e.g. activity based budgets) (ranked 3) of high future emphasis and of significant benefits received (ranked 4), Strategic Man. Accounting: Competitor appraisal based on published financial statements (ranked 9), of high future emphasis and of medium benefits received (ranked 21), and Benchmarking carried out: Within the wider organization was of high importance for future emphasis (ranked 12) improved from past benefits (ranked 17), Benchmarking carried out: With outside organizations was of high importance in benefits received (ranked 9) but dropped to medium importance of future emphasis (ranked 15).

The last four in strategic practices were of low importance in past benefits received and were Strategic Man. Accounting: Strategic costing (ranked 38), Strategic Man. Accounting: Life cycle costing (ranked 31), Strategic Man. Accounting: Brand value budgeting and monitoring (ranked 40), Strategic Man. Accounting: Value chain

costing (ranked 41) all but life cycle costing were improved but still in the low future emphasis (ranked respectively 29, 31, 31, 33).

Table 6, lists the respective MAP that had at least six point difference in rankings between past benefits received and future emphasis. This is performed in order to dictate those practices where the degree of emphasis is anticipated to change.

The practices which practitioners would emphasize more in the future were: some forms of budgeting systems (planning - cash flows, compensating managers, planning - financial position), performance evaluation (qualitative measures, employee attitudes, non-financial measures, team performance), capital budgeting (payback period), long range forecasting, strategic plans developed: separate from budgets, operations research techniques, decision support systems: activity based management, and some forms of strategic management accounting (competitor appraisal based on published financial statements, strategic pricing, strategic costing, brand value budgeting and monitoring, value chain costing).

As seen there is an increasing emphasis on strategic practices and mostly on SMA practices. Practices of decreased interest were some forms of decision support systems (product profitability analysis, cost volume profit analysis - breakeven analysis), detail budgeting systems (planning - day-to-day operations), benchmarking techniques (with outside organizations, operational processes), performance evaluation (controllable profit), and some methods of cost analysis (project costing, job order costing, absorption or full costing).

As far as contemporary and traditional practices, tables 4 and 5 provide evidence that practices implemented up to date in Greece, for the total, are almost equally divided for contemporary and traditional practices. It is important to mention that for the future emphasis techniques the ones for increasing interest six were traditional and thirteen contemporary and for the decreasing interest seven were traditional and two contemporary, Table 6. In total there is a marginal preference in more contemporary practices (total 15) over the traditional ones (total 13). This trend is consistent with researchers who had predicted a decreasing use of traditional techniques (Johnson, 1992; Kaplan, 1994). Similar trend was reported and from Chenhall and Langfield-Smith (1998) for Australia.

5. Conclusion and Limitations of this Research

The evidence reported in this article refers on the relative implementation and benefits gained from both traditional and currently developed MAP in big and medium sized Greek firms and from the sectors of manufacturing, services and commerce. Across the sample, the majority of the practices surveyed were implemented by most organizations. The most benefits per sector by practicing the various MAP is first Commerce, second Services, and last Manufacturing. While the implementation rates for many currently-developed practices were of a high level and similar than those presented in other countries, in total, traditional MAP were

found to be marginally higher implemented than the currently developed ones. However, there is an increasing trend for firms to place greater emphasis in the future on currently developed techniques instead the traditional ones, particularly performance evaluation techniques and strategic management accounting.

The main reasons for shifting to contemporary practices is mostly due to size since large companies have the “luxury” to invest to modern technologies and experiment new trends. Also increased competition among firms creates a more demanding environment and the need for more “specialized” information. In the last fifteen years Greek companies are expanding rapidly in the Balkans and rest of the world, also foreign companies have created their subsidiaries in Greece, both these situations have exposed practitioners to more contemporary practices besides the traditional ones. Another reason is that many Greek nationals study in universities in the USA, the UK and other “westernised” countries where educated with the latest trends and theories, most of this knowledge comes back in the country and in many cases is implemented in daily practice.

Also, there are several limitations in this study.

First, the study divided companies in three general categories, manufacturing, commerce and services. More segments could be used for example, categories such as banks, hospitals, mines, etc. Limiting the number of industries allows the in-depth insights and within-sample comparisons needed to explore the research questions. Also why practitioners in each sector prefer specific practices? Is it a matter of choice or a necessity?

A second limitation is the relatively small number of companies participated. Mainly top financial managers, controllers, and senior management accountants were participated. A larger sample size would provide more explanatory power and greater confidence in the findings.

Third, in the questionnaire survey, even a terminology list was supplied, some of the items and as with all surveys there is a possibility participant to have misinterpreted some of them. In order to eliminate this possibility it was ensured that participants had a firm knowledge of the organizations’ management accounting practices.

Finally, the research does not suggest specific ordering of implementation (in the practices) which provides maximum benefit.

The final section presents additional suggestions for future research based on the conclusions of this dissertation.

6. Directions for the Future

This article suggests several extensions for future research. One direction involves extending the sample. Both the number of firms and industries could be increased. Even it is difficult to have both large sample sizes and the volume of information necessary for making correct construct measurements this could be a significant issue to consider. Further research is necessary to investigate the increased efficacy of MAP in smaller firms. First, tests involving additional organizations in all categories would increase the sample size and, therefore, allow for more powerful statistical analysis. Second, segmentation of industries will provide further insights into the roles that industry plays in the relationships outlined by the model. In particular, expansion of the study to industries which face more or less hostile and competitive environments may increase understanding of the respective practices. Also, companies in less hostile environments may implement different practices from those in more aggressive ones.

Next, replicating the quantitative and qualitative parts of this study with the same sample could also provide insight into the dynamic elements of practices. For example, repeating the study in manufacturing, commerce and services may lead to identification of core and peripheral practices and contingent factors as well. It will be a good opportunity to test whether practices change over time. Do practices experience a life cycle of value?

Also investigation is possible to explain conditions before and after the implementation of MAP. Further investigation is needed in the nature of the dependence between traditional and currently developed MAP and other management practices. The lower benefits relating the currently developed techniques focus on the conditions necessary to effectively implement these practices.

Lately, Greece is considered as a developed country. This study is proposed for research in more developed and larger economies just to measure deeper interactions among the practices proposed. Alternatively could be applied to emerging economies as well to investigate trends in MAP supplemented by other important contingent variables such as strategy, technology, culture, external environment, business unit and industry characteristics, and knowledge and observability factors (Fisher, 1995).

Finally, a better understanding is necessary of the factors that influence differences in the levels of adoption of recently developed practices between industries.

In sum, this research supports beliefs that an integrated set of management accounting practices (affected by internal and external contingent factors and company characteristics) could affect positively the organization's performance. While this research has provided insights to our understanding of practices there is still much to learn. The possibility for more contributions permits expanding and

replication of this study for future development of this important and vast research area.

APPENDIX

Table 1. Demographic Data

| | | | |
|---|------------|--|-----------|
| <u>Company classification</u> | | <u>Position of Respondent</u> | |
| Manufacturing | 53 | Financial Manager | 91 |
| Services | 52 | Financial Controller | 71 |
| Commerce | 93 | Sr Management Accountant | 34 |
| Total sample | 198 | Sr Accountant | 1 |
| <u>Listed in Athens Stock Exchange</u> | | Accountant | 1 |
| Listed | 105 | Total sample | 19 |
| Non Listed | 93 | Total sample | 8 |
| Total sample | 198 | <u>Size of Organizations:</u> | |
| <u>Size of Organizations:</u> | | <u>Size of Organizations:</u> | |
| <i>Turnover - m Euro</i> | | <i>Manpower - employees</i> | |
| 0-300 | 149 | 0-200 | 67 |
| 301-600 | 36 | 201-500 | 57 |
| 601-900 | 7 | 501-1000 | 34 |
| 901-1,000 | 2 | 1001-2500 | 29 |
| 1,001-2,000 | 3 | 2501-7000 | 8 |
| 2,001-3,500 | 1 | 7001+ | 3 |
| Total sample | 198 | Total sample | 19 |
| <u>According to EU statistics</u> | | <u>According to EU statistics</u> | |
| <=5m (small) | 0 | <50 employees (small) | 13 |
| >5m and <=40m (medium) | 9 | 50-250 employees (medium) | 62 |
| >40m (large) | 189 | >250 employees (large) | 12 |
| Total sample | 198 | Total sample | 19 |
| | | Total sample | 8 |

Table 2. Management Accounting Practices: Significant Benefits – Past 3 years

| | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|

| Management Accounting Practice | Mean | SD^a | Rank by mean |
|--|-------------|-----------------------|---------------------|
| <i>Significant Benefit</i> | | | |
| Detail budgeting systems for: Controlling costs | 4.60 | 0.491 | 1 |
| Decision support systems: Product profitability analysis | 4.44 | 0.627 | 2 |
| Performance evaluation is based on: Budget variance analysis | 4.43 | 0.574 | 3 |
| Detail budgeting systems for: Linking financial position, resources and activities (e.g. activity based budgets) | 4.41 | 0.624 | 4 |
| Performance evaluation is based on: Return (profit) on investment | 4.40 | 0.644 | 5 |
| Formal strategic planning | 4.39 | 0.601 | 6 |
| Cost analysis: Absorption or Full costing | 4.39 | 0.663 | 6 |
| Performance evaluation is based on: Customer satisfaction surveys | 4.39 | 0.603 | 6 |
| Strategic Plans Developed: Together with budgets | 4.38 | 0.701 | 7 |
| Detail budgeting systems for: Planning - Day-to-day operations | 4.38 | 0.622 | 7 |
| Detail budgeting systems for: Planning - Cash flows | 4.36 | 0.698 | 8 |
| Benchmarking carried out: With outside organizations | 4.33 | 0.631 | 9 |
| Cost analysis: Job Order Costing | 4.33 | 0.702 | 9 |
| Cost analysis: Project Costing | 4.33 | 0.583 | 9 |
| Detail budgeting systems for: Planning – Operational Budgeting | 4.31 | 0.705 | 10 |
| Capital Budgeting: Net present value (NPV) | 4.28 | 0.729 | 11 |
| Performance evaluation is based on: Ongoing supplier evaluations | 4.28 | 0.700 | 11 |
| Decision support systems: Cost volume profit analysis (e.g. breakeven analysis) | 4.27 | 0.736 | 12 |
| Performance evaluation is based on: Controllable profit | 4.25 | 0.732 | 13 |
| Performance evaluation is based on: Divisional profit | 4.24 | 0.782 | 14 |
| <i>Medium Benefit</i> | | | |
| Long Range Forecasting | 4.23 | 0.802 | 15 |
| Benchmarking of: Operational processes | 4.23 | 0.778 | 15 |
| Capital Budgeting: Return on Investment (ROI) | 4.22 | 0.803 | 16 |
| Benchmarking of: Product characteristics | 4.22 | 0.683 | 16 |
| Benchmarking of: Strategic priorities | 4.22 | 0.801 | 16 |
| Benchmarking carried out: Within the wider organization | 4.21 | 0.865 | 17 |
| Capital Budgeting: Internal rate of return (IRR) | 4.20 | 0.643 | 18 |
| Performance evaluation is based on: Qualitative measures | 4.19 | 0.775 | 19 |

| Management Accounting Practice | Mean | SD^a | Rank by mean |
|---|-------------|-----------------------|---------------------|
| Cost analysis: Activity – based costing | 4.17 | 0.799 | 20 |
| Capital Budgeting: Payback period | 4.13 | 1 | 21 |
| Benchmarking of: Management processes | 4.13 | 0.674 | 21 |
| Strategic Man. Accounting: Competitor appraisal based on published financial statements | 4.13 | 0.687 | 21 |
| Detail budgeting systems for: Planning - Financial position | 4.11 | 0.825 | 22 |
| Cost analysis: Standard Costing | 4.06 | 0.791 | 23 |
| Strategic Man. Accounting: Target costing | 4.06 | 0.856 | 23 |
| Detail budgeting systems for: Compensating managers | 4.04 | 0.876 | 24 |
| Decision support systems: Product life cycle | 4.03 | 0.937 | 25 |
| Strategic Man. Accounting: Competitor cost assessment | 4.01 | 0.92 | 26 |
| Value chain analysis | 4.00 | 0.728 | 27 |
| Operations research techniques | 3.99 | 0.864 | 28 |
| Low Benefit | | | |
| Capital Budgeting: NPV sensitivity analysis | 3.98 | 1.015 | 29 |
| Strategic Man. Accounting: Strategic pricing | 3.98 | 0.902 | 29 |
| Cost analysis: Process Costing | 3.94 | 0.869 | 30 |
| Strategic Man. Accounting: Life cycle costing | 3.93 | 1.063 | 31 |
| Strategic Man. Accounting: Quality costing | 3.93 | 0.947 | 31 |
| Performance evaluation is based on: Team performance | 3.89 | 0.968 | 32 |
| Strategic Man. Accounting: Attribute costing | 3.89 | 0.971 | 32 |
| Cost analysis: Marginal / Direct Costing | 3.88 | 1.009 | 33 |
| Performance evaluation is based on: Employee attitudes | 3.86 | 0.884 | 34 |
| Performance evaluation is based on: Balance scorecard (mix of financial and non-financial measures) | 3.85 | 1.116 | 35 |
| Performance evaluation is based on: Residual income (e.g. interested adjusted profit) | 3.83 | 0.903 | 36 |
| Decision support systems: Activity based management | 3.79 | 1.138 | 37 |
| Strategic Man. Accounting: Strategic costing | 3.72 | 0.964 | 38 |
| Performance evaluation is based on: Non – financial measures | 3.69 | 0.926 | 39 |
| Strategic Man. Accounting: Brand value budgeting and monitoring | 3.67 | 1.014 | 40 |
| Strategic Man. Accounting: Value chain analysis | 3.57 | 1.086 | 41 |
| Strategic Plans Developed: Separate from budgets | 2.93 | 1.521 | 42 |

SD^a = standard deviation

Table 3. Management Accounting Practices: Past three years implementation

| Management accounting practice | PAST 3 YEARS IMPLEMENTATION | |
|--|-----------------------------|------|
| | % | Rank |
| <i>High Implementation</i> | | |
| Formal strategic planning | 100 | 1 |
| Detail budgeting systems for: Planning - Cash flows | 100 | 1 |
| Detail budgeting systems for: Controlling costs | 99 | 2 |
| Detail budgeting systems for: Compensating managers | 99 | 2 |
| Detail budgeting systems for: Linking financial position, resources and activities (e.g. activity based budgets) | 98 | 3 |
| Performance evaluation is based on: Budget variance analysis | 98 | 3 |
| Performance evaluation is based on: Customer satisfaction surveys | 97 | 4 |
| Performance evaluation is based on: Return (profit) on investment | 95 | 5 |
| Performance evaluation is based on: Qualitative measures | 93 | 6 |
| Strategic Plans Developed: Together with budgets | 92 | 7 |
| Long Range Forecasting (LT) | 91 | 8 |
| Capital Budgeting: Net present value (NPV) | 90 | 9 |
| Detail budgeting systems for: Planning – Operational Budgeting | 90 | 9 |
| Decision support systems: Product profitability analysis | 90 | 9 |
| Strategic Man. Accounting: Competitor appraisal based on published financial statements | 90 | 9 |
| Detail budgeting systems for: Planning - Financial position | 88 | 10 |
| Performance evaluation is based on: Divisional profit | 87 | 11 |
| Capital Budgeting: Return on Investment (ROI) | 86 | 12 |
| Benchmarking carried out: Within the wider organization | 86 | 12 |
| Performance evaluation is based on: Employee attitudes | 86 | 12 |
| <i>Medium Implementation</i> | | |
| Capital Budgeting: Payback period | 83 | 13 |
| Performance evaluation is based on: Team performance | 82 | 14 |
| Performance evaluation is based on: Ongoing supplier evaluations | 82 | 14 |
| Detail budgeting systems for: Planning - Day-to-day operations | 81 | 15 |
| Benchmarking carried out: With outside organizations | 80 | 16 |
| Strategic Man. Accounting: Strategic pricing | 79 | 17 |

| Management accounting practice | PAST 3 YEARS IMPLEMENTATION | |
|---|-----------------------------|------|
| | % | Rank |
| Strategic Plans Developed: Separate from budgets | 78 | 18 |
| Operations research techniques | 78 | 18 |
| Performance evaluation is based on: Non – financial measures | 78 | 18 |
| Capital Budgeting: Internal rate of return (IRR) | 76 | 19 |
| Benchmarking of: Strategic priorities | 74 | 20 |
| Performance evaluation is based on: Controllable profit | 74 | 20 |
| Strategic Man. Accounting: Quality costing | 74 | 20 |
| Cost analysis: Standard Costing | 73 | 21 |
| Strategic Man. Accounting: Competitor cost assessment | 73 | 21 |
| Strategic Man. Accounting: Target costing | 73 | 21 |
| Decision support systems: Cost volume profit analysis (e.g. breakeven analysis) | 72 | 22 |
| Benchmarking of: Product characteristics | 72 | 22 |
| Benchmarking of: Management processes | 72 | 22 |
| Cost analysis: Activity – based costing | 72 | 22 |
| Low Implementation | | |
| Benchmarking of: Operational processes | 71 | 23 |
| Strategic Man. Accounting: Attribute costing | 71 | 23 |
| Cost analysis: Project Costing | 69 | 24 |
| Decision support systems: Product life cycle | 67 | 25 |
| Value chain analysis | 67 | 25 |
| Strategic Man. Accounting: Strategic costing | 67 | 25 |
| Capital Budgeting: NPV sensitivity analysis | 66 | 26 |
| Decision support systems: Activity based management | 64 | 27 |
| Cost analysis: Marginal / Direct Costing | 64 | 27 |
| Cost analysis: Job Order Costing | 63 | 28 |
| Cost analysis: Absorption or Full costing | 61 | 29 |
| Strategic Man. Accounting: Life cycle costing | 60 | 30 |
| Performance evaluation is based on: Residual income (e.g. interested adjusted profit) | 59 | 31 |
| Strategic Man. Accounting: Brand value budgeting and monitoring | 57 | 32 |
| Strategic Man. Accounting: Value chain costing | 55 | 33 |
| Performance evaluation is based on: Balance scorecard (mix of financial and non-financial measures) | 48 | 34 |
| Cost analysis: Process Costing | 45 | 35 |

Table 4. Management Accounting Practices: Past Implementation – by category

| Management accounting practice | IMPLEMENTATION PAST 3 YEARS | | Importance | CAT* | T/C** |
|---|-----------------------------|------|------------|------|-------|
| | % | Rank | | | |
| Detail budgeting systems for: Controlling costs | 99 | 2 | High | F | T |
| Performance evaluation is based on: Budget variance analysis | 98 | 3 | High | F | T |
| Performance evaluation is based on: Return (profit) on investment | 95 | 5 | High | F | T |
| Detail budgeting systems for: Planning – Operational Budgeting | 90 | 9 | High | F | T |
| Decision support systems: Product profitability analysis | 90 | 9 | High | F | T |
| Performance evaluation is based on: Divisional profit | 87 | 11 | High | F | T |
| Performance evaluation is based on: Controllable profit | 74 | 20 | High | F | T |
| Performance evaluation is based on: Residual income (e.g. interested adjusted profit) | 59 | 31 | Low | F | T |
| Detail budgeting systems for: Compensating managers | 99 | 2 | High | NF | T |
| Performance evaluation is based on: Customer satisfaction surveys | 97 | 4 | High | NF | C |
| Performance evaluation is based on: Qualitative measures | 93 | 6 | High | NF | C |
| Performance evaluation is based on: Employee attitudes | 86 | 12 | High | NF | C |
| Performance evaluation is based on: Ongoing supplier evaluations | 82 | 14 | Medium | NF | C |
| Performance evaluation is based on: Team performance | 82 | 14 | Medium | NF | C |
| Performance evaluation is based on: Non – financial measures | 78 | 18 | Medium | NF | C |
| Performance evaluation is based on: Balance scorecard (mix of financial and non-financial measures) | 48 | 34 | Low | NF | C |

| Management accounting practice | IMPLEMENTATION PAST 3 YEARS | | Importance | CAT* | T/C** |
|--|-----------------------------|------|------------|------|-------|
| | % | Rank | | | |
| Detail budgeting systems for: Planning - Cash flows | 100 | 1 | High | P | T |
| Detail budgeting systems for: Planning - Financial position | 88 | 10 | High | P | T |
| Detail budgeting systems for: Planning - Day-to-day operations | 81 | 15 | Medium | P | T |
| Operations research techniques | 78 | 18 | Medium | P | C |
| Cost analysis: Standard Costing | 73 | 21 | Medium | P | T |
| Decision support systems: Cost volume profit analysis (e.g. breakeven analysis) | 72 | 22 | Medium | P | T |
| Cost analysis: Project Costing | 69 | 24 | Medium | P | T |
| Cost analysis: Marginal / Direct Costing | 64 | 27 | Low | P | T |
| Cost analysis: Job Order Costing | 63 | 28 | Low | P | T |
| Cost analysis: Absorption or Full costing | 61 | 29 | Low | P | T |
| Cost analysis: Process Costing | 45 | 35 | Low | P | T |
| Formal strategic planning | 100 | 1 | High | PLT | T |
| Strategic Plans Developed: Together with budgets | 92 | 7 | High | PLT | T |
| Long Range Forecasting | 91 | 8 | High | PLT | T |
| Capital Budgeting: Net present value (NPV) | 90 | 9 | High | PLT | T |
| Capital Budgeting: Return on Investment (ROI) | 86 | 12 | High | PLT | T |
| Capital Budgeting: Payback period | 83 | 13 | Medium | PLT | T |
| Strategic Plans Developed: Separate from budgets | 78 | 18 | Medium | PLT | T |
| Capital Budgeting: Internal rate of return (IRR) | 76 | 19 | Medium | PLT | T |
| Capital Budgeting: NPV sensitivity analysis | 66 | 26 | Low | PLT | T |
| Detail budgeting systems for: Linking financial position, resources and activities (e.g. activity based budgets) | 98 | 3 | High | SP | T |

| Management accounting practice | IMPLEMENTATION PAST 3 YEARS | | Importance | CAT* | T/C** |
|---|-----------------------------|------|------------|------|-------|
| | % | Rank | | | |
| Strategic Man. Accounting: Competitor appraisal based on published financial statements | 90 | 9 | High | SP | C |
| Benchmarking carried out: Within the wider organization | 86 | 12 | High | SP | C |
| Benchmarking carried out: With outside organizations | 80 | 16 | Medium | SP | C |
| Strategic Man. Accounting: Strategic pricing | 79 | 17 | Medium | SP | C |
| Strategic Man. Accounting: Quality costing | 74 | 20 | Medium | SP | C |
| Benchmarking of: Strategic priorities | 74 | 20 | Medium | SP | C |
| Strategic Man. Accounting: Target costing | 73 | 21 | Medium | SP | C |
| Strategic Man. Accounting: Competitor cost assessment | 73 | 21 | Medium | SP | C |
| Benchmarking of: Product characteristics | 72 | 22 | Medium | SP | C |
| Benchmarking of: Management processes | 72 | 22 | Medium | SP | C |
| Cost analysis: Activity – based costing | 72 | 22 | Medium | SP | C |
| Strategic Man. Accounting: Attribute costing | 71 | 23 | Low | SP | C |
| Benchmarking of: Operational processes | 71 | 23 | Low | SP | C |
| Decision support systems: Product life cycle | 67 | 25 | Low | SP | C |
| Value chain analysis | 67 | 25 | Low | SP | C |
| Strategic Man. Accounting: Strategic costing | 67 | 25 | Low | SP | C |
| Decision support systems: Activity based management | 64 | 27 | Low | SP | C |
| Strategic Man. Accounting: Life cycle costing | 60 | 30 | Low | SP | C |
| Strategic Man. Accounting: Brand value budgeting and monitoring | 57 | 32 | Low | SP | C |
| Strategic Man. Accounting: Value chain costing | 55 | 33 | Low | SP | C |

| Management accounting practice | IMPLEMENTATION PAST 3 YEARS | | Importance | CAT* | T/C** |
|---|-----------------------------|------|------------|------|-------|
| | % | Rank | | | |
| **T=Traditional Practices (count) 29 C=Contemporary Practices (count) 28 Total 57 | | | | | |

CAT*: F: Financial, NF: Non-Financial, P: Planning, P LT: Planning Long Term, SP: Strategic Practices. T/C**, T=Traditional Practices, C=Contemporary Practices

Table 5. Management Accounting Practices: Past Benefit - Future Emphasis

| Management Accounting Practice | PAST | | | | FUTURE | | CA T* | T/C** |
|---|------|-----------------|------|---------------|---------------|------|-------|-------|
| | Mean | SD ^a | Rank | Benefit Rec/d | % of Emphasis | Rank | | |
| Detail budgeting systems for: Controlling costs | 4.60 | 0.49 | 1 | High | 99 | 2 | F | T |
| Decision support systems: Product profitability analysis | 4.44 | 0.63 | 2 | High | 90 | 9 | F | T |
| Performance evaluation is based on: Budget variance analysis | 4.43 | 0.57 | 3 | High | 98 | 3 | F | T |
| Performance evaluation is based on: Return (profit) on investment | 4.40 | 0.64 | 5 | High | 95 | 5 | F | T |
| Detail budgeting systems for: Planning – Operational Budgeting | 4.31 | 0.71 | 10 | High | 90 | 9 | F | T |
| Performance evaluation is based on: Controllable profit | 4.25 | 0.73 | 13 | High | 72 | 21 | F | T |
| Performance evaluation is based on: Divisional profit | 4.24 | 0.78 | 14 | High | 87 | 11 | F | T |

| Management Accounting Practice | PAST | | | | FUTURE | | CA T* | T/C** |
|---|------|-----------------|------|---------------|---------------|------|-------|-------|
| | Mean | SD ^a | Rank | Benefit Rec/d | % of Emphasis | Rank | | |
| Performance evaluation is based on: Residual income (e.g. interested adjusted profit) | 3.83 | 0.9 | 36 | Low | 52 | 32 | F | T |
| Performance evaluation is based on: Customer satisfaction surveys | 4.39 | 0.6 | 6 | High | 97 | 4 | NF | C |
| Performance evaluation is based on: Ongoing supplier evaluations | 4.28 | 0.7 | 11 | High | 82 | 13 | NF | C |
| Performance evaluation is based on: Qualitative measures | 4.19 | 0.78 | 19 | Medium | 93 | 6 | NF | C |
| Detail budgeting systems for: Compensating managers | 4.04 | 0.88 | 24 | Medium | 99 | 2 | NF | T |
| Performance evaluation is based on: Team performance | 3.89 | 0.97 | 32 | Low | 77 | 17 | NF | C |
| Performance evaluation is based on: Employee attitudes | 3.86 | 0.88 | 34 | Low | 81 | 14 | NF | C |
| Performance evaluation is based on: Balance scorecard (mix of financial and non-financial measures) | 3.85 | 1.12 | 35 | Low | 48 | 34 | NF | C |
| Performance evaluation is based on: Non – financial measures | 3.69 | 0.93 | 39 | Low | 78 | 16 | NF | C |
| Cost analysis: Absorption or Full costing | 4.39 | 0.66 | 6 | High | 61 | 30 | P | T |

| Management Accounting Practice | PAST | | | | FUTURE | | CA T* | T/ C** |
|---|------|-----------------|------|---------------|---------------|------|---------|--------|
| | Mean | SD ^a | Rank | Benefit Rec/d | % of Emphasis | Rank | | |
| Detail budgeting systems for: Planning - Day-to-day operations | 4.38 | 0.62 | 7 | High | 81 | 14 | P | T |
| Detail budgeting systems for: Planning - Cash flows | 4.36 | 0.7 | 8 | High | 100 | 1 | P | T |
| Cost analysis: Project Costing | 4.33 | 0.58 | 9 | High | 68 | 24 | P | T |
| Cost analysis: Job Order Costing | 4.33 | 0.7 | 9 | High | 62 | 29 | P | T |
| Decision support systems: Cost volume profit analysis (e.g. breakeven analysis) | 4.27 | 0.74 | 12 | High | 72 | 21 | P | T |
| Detail budgeting systems for: Planning - Financial position | 4.11 | 0.83 | 22 | Medium | 88 | 10 | P | T |
| Cost analysis: Standard Costing | 4.06 | 0.79 | 23 | Medium | 67 | 25 | P | T |
| Operations research techniques | 3.99 | 0.86 | 28 | Medium | 72 | 21 | P | C |
| Cost analysis: Process Costing | 3.94 | 0.87 | 30 | Low | 39 | 35 | P | T |
| Cost analysis: Marginal / Direct Costing | 3.88 | 1.01 | 33 | Low | 62 | 29 | P | T |
| Formal strategic planning | 4.39 | 0.6 | 6 | High | 100 | 1 | P LT | T |
| Strategic Plans Developed: Together with budgets | 4.38 | 0.7 | 7 | High | 92 | 7 | P LT | T |
| Capital Budgeting: Net present value (NPV) | 4.28 | 0.73 | 11 | High | 90 | 9 | P LT | T |
| Long Range Forecasting | 4.23 | 0.8 | 15 | Medium | 91 | 8 | P LT | T |
| Capital Budgeting: Return on Investment | 4.22 | 0.8 | 16 | Medium | 86 | 12 | P LT | T |

| Management Accounting Practice | PAST | | | | FUTURE | | CA T* | T/C** |
|--|------|-----------------|------|---------------|---------------|------|-------|-------|
| | Mean | SD ^a | Rank | Benefit Rec/d | % of Emphasis | Rank | | |
| (ROI) | | | | | | | | |
| Capital Budgeting: Internal rate of return (IRR) | 4.20 | 0.64 | 18 | Medium | 76 | 18 | PLT | T |
| Capital Budgeting: Payback period | 4.13 | 1 | 21 | Medium | 92 | 7 | PLT | T |
| Capital Budgeting: NPV sensitivity analysis | 3.98 | 1.02 | 29 | Low | 66 | 26 | PLT | T |
| Strategic Plans Developed: Separate from budgets | 2.93 | 1.52 | 42 | Low | 74 | 20 | PLT | T |
| Detail budgeting systems for: Linking financial position, resources and activities (e.g. activity based budgets) | 4.41 | 0.62 | 4 | High | 98 | 3 | SP | T |
| Benchmarking carried out: With outside organizations | 4.33 | 0.63 | 9 | High | 80 | 15 | SP | C |
| Benchmarking of: Operational processes | 4.23 | 0.78 | 15 | Medium | 69 | 23 | SP | C |
| Benchmarking of: Product characteristics | 4.22 | 0.68 | 16 | Medium | 72 | 21 | SP | C |
| Benchmarking of: Strategic priorities | 4.22 | 0.8 | 16 | Medium | 72 | 21 | SP | C |
| Benchmarking carried out: Within the wider organization | 4.21 | 0.87 | 17 | Medium | 86 | 12 | SP | C |
| Cost analysis: Activity – based costing | 4.17 | 0.8 | 20 | Medium | 69 | 23 | SP | C |
| Strategic Man. Accounting: Competitor appraisal based on published financial statements | 4.13 | 0.69 | 21 | Medium | 90 | 9 | SP | C |

| Management Accounting Practice | PAST | | | | FUTURE | | CA T* | T/C** |
|---|------|-----------------|------|---------------|---------------|------|-------|-------|
| | Mean | SD ^a | Rank | Benefit Rec/d | % of Emphasis | Rank | | |
| Benchmarking of: Management processes | 4.13 | 0.67 | 21 | Medium | 67 | 25 | SP | C |
| Strategic Man. Accounting: Target costing | 4.06 | 0.86 | 23 | Medium | 71 | 22 | SP | C |
| Decision support systems: Product life cycle | 4.03 | 0.94 | 25 | Medium | 64 | 28 | SP | C |
| Strategic Man. Accounting: Competitor cost assessment | 4.01 | 0.92 | 26 | Medium | 67 | 25 | SP | C |
| Value chain analysis | 4.00 | 0.73 | 27 | Medium | 65 | 27 | SP | C |
| Strategic Man. Accounting: Strategic pricing | 3.98 | 0.9 | 29 | Low | 75 | 19 | SP | C |
| Strategic Man. Accounting: Quality costing | 3.93 | 0.95 | 31 | Low | 69 | 23 | SP | C |
| Strategic Man. Accounting: Life cycle costing | 3.93 | 1.06 | 31 | Low | 55 | 31 | SP | C |
| Strategic Man. Accounting: Attribute costing | 3.89 | 0.97 | 32 | Low | 67 | 25 | SP | C |
| Decision support systems: Activity based management | 3.79 | 1.14 | 37 | Low | 62 | 29 | SP | C |
| Strategic Man. Accounting: Strategic costing | 3.72 | 0.96 | 38 | Low | 62 | 29 | SP | C |
| Strategic Man. Accounting: Brand value budgeting and monitoring | 3.67 | 1.01 | 40 | Low | 55 | 31 | SP | C |
| Strategic Man. Accounting: Value | 3.57 | 1.09 | 41 | Low | 50 | 33 | SP | C |

| Management Accounting Practice | PAST | | | | FUTURE | | CA T* | T/C** |
|--|------|-----------------|------|---------------|---------------|------|-------|-------|
| | Mean | SD ^a | Rank | Benefit Rec/d | % of Emphasis | Rank | | |
| chain costing | | | | | | | | |
| **T=Traditional Practices (count) 29 C=Contemporary Practices (count) 28 Total 57 | | | | | | | | |

CAT*: F: Financial, NF: Non-Financial, P: Planning, P LT: Planning Long Term, SP: Strategic Practices. T/C**, T=Traditional Practices, C=Contemporary Practices
^aSD = standard deviation

Table 6. Management Accounting Practices: Comparison of Rankings – Future Emphasis

| Management Accounting Practice | T/C** | Rank Past Benefits | Rank Future Emphasis | Difference in rankings |
|---|-------|--------------------|----------------------|------------------------|
| Increased Ranking | | | | |
| Detail budgeting systems for: Planning - Cash flows | T | 8 | 1 | 7 |
| Detail budgeting systems for: Compensating managers | T | 24 | 2 | 22 |
| Performance evaluation is based on: Qualitative measures | C | 19 | 6 | 13 |
| Capital Budgeting: Payback period | T | 21 | 7 | 14 |
| Long Range Forecasting | T | 15 | 8 | 7 |
| Strategic Man. Accounting: Competitor appraisal based on published financial statements | C | 21 | 9 | 12 |
| Detail budgeting systems for: Planning - Financial position | T | 22 | 10 | 12 |
| Performance evaluation is based on: Employee attitudes | C | 34 | 14 | 20 |
| Performance evaluation is based on: Non – financial measures | C | 39 | 16 | 23 |
| Performance evaluation is based on: Team performance | C | 32 | 17 | 15 |

| Management Accounting Practice | T/C ** | Rank Past Benefits | Rank Future Emph asis | Differ ence in rankings |
|---|-------------------|-----------------------------------|--|--|
| Strategic Man. Accounting: Strategic pricing | C | 29 | 19 | 10 |
| Strategic Plans Developed: Separate from budgets | T | 42 | 20 | 22 |
| Operations research techniques | C | 28 | 21 | 7 |
| Strategic Man. Accounting: Quality costing | C | 31 | 23 | 8 |
| Strategic Man. Accounting: Attribute costing | C | 32 | 25 | 7 |
| Decision support systems: Activity based management | C | 37 | 29 | 8 |
| Strategic Man. Accounting: Strategic costing | C | 38 | 29 | 9 |
| Strategic Man. Accounting: Brand value budgeting and monitoring | C | 40 | 31 | 9 |
| Strategic Man. Accounting: Value chain costing | C | 41 | 33 | 8 |
| Traditional Practices: | 6 | | | |
| Contemporary Practices: | 13 | | | |
| Decreased Ranking | | | | |
| Decision support systems: Product profitability analysis | T | 2 | 9 | -7 |
| Detail budgeting systems for: Planning - Day-to-day operations | T | 7 | 14 | -7 |
| Benchmarking carried out: With outside organizations | C | 9 | 15 | -6 |
| Decision support systems: Cost volume profit analysis (e.g. breakeven analysis) | T | 12 | 21 | -9 |
| Performance evaluation is based on: Controllable profit | T | 13 | 21 | -8 |
| Benchmarking of: Operational processes | C | 15 | 23 | -8 |
| Cost analysis: Project Costing | T | 9 | 24 | -15 |
| Cost analysis: Job Order Costing | T | 9 | 29 | -20 |
| Cost analysis: Absorption or Full costing | T | 6 | 30 | -24 |
| Traditional Practices: | 7 | | | |
| Contemporary Practices: | 2 | | | |
| Total Traditional Practices: 13 | | | | |
| Total Contemporary Practices: 15 | | | | |

| Management Accounting Practice | T/C ** | Rank Past Benefits | Rank Future Emphasis | Difference in rankings |
|---|-------------------|-----------------------------------|-------------------------------------|-----------------------------------|
| <i>T/C**: T=Traditional, C:Contemporary</i> | | | | |

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